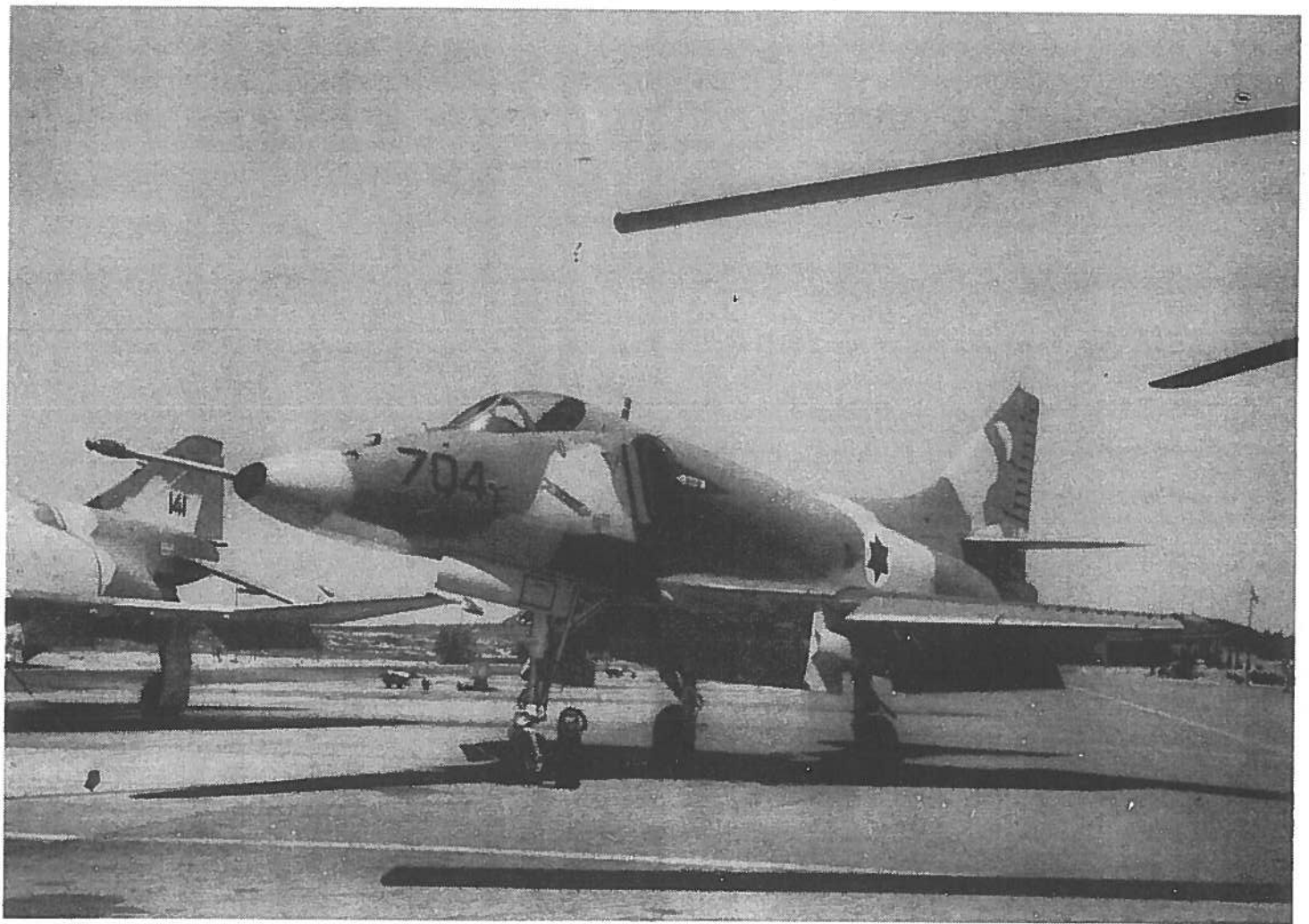


small air forces observer

MANCHURIAN AF IN WW2
AUSTRALIAN NORSEMEN
LATIN AMERICAN T-33
BELGIAN WW1 SCOUTS
ISRAELI SKYHAWKS
DeHAVILLAND MOTH
RAAF OTTERS

US \$1.75



vol 6 no 2 (22)

January 1982

small air forces observer

the newsletter of the Small Air Forces Clearing House

SAFCH SALES SERVICE: The following are available from the editorial office (27965 Berwick Dr., Carmel, CA 93923). All prices are in US \$ and include surface postage.

SOUTH AFRICAN AIR FORCE DECALS #1 - 62 "castle" insignia plus miscellaneous inscriptions (1/72). \$2.00

SOUTH AFRICAN AIR FORCE DECALS #2 - same as above but with "leaping antelope" roundels (1/72). \$2.00

MEXICAN DECALS

- 72-0 Mexican national insignia (11 mm); 6 insignia to compliment sheets 4, 13/14, & 15. \$0.80
- 1 MEAF P-47D in the Philippines. \$1.30
- 2 FAM F-47D in Mexico (olive green). \$1.35
- 3 FAM F-47D in Mexico (grey). \$1.35*
- 4 FAM T-33A. \$1.40*
- 5 FAM A-24 Dauntless. \$1.40
- 6 FAM C-47 Dakota. \$1.60
- 7 Navy Kingfisher (wheels). \$1.75*
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48-1 MEAF P-47D in the Philippines. \$1.60

* Temporarily out of stock.

LGR DECALS

- 1 Mexican Air Force B-25J. \$1.75
- 2 Mexican Navy HU-16B Albatros. \$1.75
- 3 Mexican Navy PBV-5A Catalina. \$1.75

TBU #58 SAMOLOT MYSLIWSKI SPITFIRE Mk I-V, K. Choloniewski. 20 pages 6 1/2 by 9 1/2 inches, 14 photos, 14 color side views, and one color 4-view drawing. Spitfires in Polish Squadrons. \$3.00

BACK ISSUES: New subscriptions begin with all issues of the volume current at the time payment is received. If you desire otherwise, please specify issues desired. Back issues, when available, are \$1.25 each plus postage. Issues #1 through #9 are out of print, although Xerox copies are available at cost. For a list of back issues and their costs, send 2 1st class stamps (or 2 IRCs) to the editorial office.

SAFO EDITORIAL POLICY: The purpose of the SAFO is to "promote interest in the history and modeling of the a/c of the smaller countries". In support of this goal, the SAFO will publish articles on all aspects of aviation, both military and civil, from all periods of time and for all the smaller countries. (1) All manuscripts submitted by members will be published in the next available issue of the SAFO. (2) Subscription money will be used only to print and mail the SAFO; there will be no "miscellaneous" column in our budget. And, (3) members are encouraged to sponsor subscriptions for organizations, libraries, individuals (especially those in countries where US funds are difficult to obtain).

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SAFO is distributed in England by Midland Counties Publications, 24 The Hollow, Earl Shilton, Leicester LE9 7NA; and in the USA by Bill Dean Books, 166-41 Powells Cove Blvd., Whitestone, NY 11357.

EDITORIAL

APOLOGIES: Several issues ago, I published a letter from a member who described how he had obtained a re-conditioned airbrush from the Badger factory showroom. Apparently this was a mistake, because Badger wrote to me saying that they do not sell, and never have sold, reconditioned airbrushes. My apologies to Badger and to SAFO readers for any inconvenience this mistake may have caused.

Because of an misunderstanding, the author's name was omitted from the article on the Argentine Ducks which appeared in SAFO #21. This excellent article was the work of Georg van Rauch (SAFCH #536). My sincerest apologies to Georg, such good work deserves better recognition.

SAFCH CONVENTION? On Sunday 9 May 1982, IPMS MONTEREY will host its 8th Annual Scale Model Show. Besides the usual SAFCH Trophy for the Best Model of a Aircraft in the Markings of a Small Air Force, I'm also donating a Solidarity Trophy for the Best Model on a Polish Theme. Perhaps this is a good opportunity to hold a SAFCH mini-Convention including a Saturday evening get together. I know that the wife, or girl friend, would enjoy a weekend on the Monterey Peninsula. If you're interested, drop me a line at the editorial office, and I'll send you information about the Show and explain some of the things that can be done to make your visit more enjoyable and less expensive.

A limited number (one, unless otherwise indicated) of the following are available from the editorial office. (All money collected for the sales of Eastern European kits and books go to send needed material to SAFCH members in these countries.) All prices are in US \$ and include surface postage.

POLISH PROFILES (TBU): RWD-8 (5), Wellington (11), MiG-3 (5), MiG-19 (8), SB-2 (4), Beaufighter (6), Spitfire (36). \$3.00 each.

MODEL-AIRE INTERNATIONAL COLLECTOR'S CHECK LIST (1/72-scale aircraft, rockets, missiles, spacecraft, & vehicles). (2) \$4.00

HANDBOOKS OF ARMED FORCES. THE BALKANS PART I - ALBANIA, TURKEY, & GREECE 1st printing (See letters). \$5.00

IPMS BELGIUM, KIT #41 (Spring 81) (See abstracts) \$2.00

MODEL KONSTRUCTOR (Russian) #12 1980 (MiG-8 plans in 1/40 scale). \$2.00

MILITARY JOURNAL #1, WORLD WAR TWO JOURNAL #1, VIET NAM JOURNAL #1. \$1.00 each.

MIKRO KITS: (1/72) Jak-1M and LWS Czapla \$5.00 each. (1/144) PZL P-37, Karas, Potez, Breguet 19, RWD 8, PZL P-24, Po-2, Hurricane. \$1.50 each.

KP KITS: Yak-23 \$5.00

RUCH KITS: MiG-15 \$4.00

USSR KITS: (1/48) Il-2 and Mil-2 \$6.00 each. (1/100) Il-18 \$10.00.

DECALS (REVELL-BRAZIL): Varig DC-10, Cruzeiro B.727, Varig Super Constellation. \$0.50 each.

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Second-class postage paid at Carmel Valley, CA 93924.

ISRAELI SKYHAWKS

(For a short history and details of the upper-surface camouflage pattern, plus profiles of the two-seat Skyhawk, please refer to SAFO Vol.5 No.1(17), October 1980.)

NOTES ON THE PROFILES

408 is an A-4H in markings carried while the aircraft was used in the training of Israeli pilots in the USA in 1967. The aircraft still has its bureau number at the rear of the fuselage, with the last three numbers repeated on the base of the fin and on the tips of the fuel tanks. Nose of the aircraft is uncamoouflaged. Note the absence of the gun-blast panel. Fuel tank is gloss white. In this drawing can be seen the features common to the H model, such as the square fin tip and the parachute pod.

17, an A-4H in early service markings in the late 1960's. These early Skyhawks had only two digit numbers on the nose, with the national insignia located over the dive-brakes. Black gun-blast panel has been painted on. Note the different style of the antenna behind the cockpit. The camouflage of these early models did not extend far down the nose as on later aircraft. The national insignia is located under both wings between the two outer weapon pylons. This is the standard location, although exceptions exist.

52 in details almost identical to 17, except note the different antenna.

209 is a standard ex-USN A-4E with Israeli markings. Aircraft number now comprises of three digits on either the base of the fin or on the nose. Also, the national insignia is now located just behind the intake. On these early A-4E, the national insignia under the wing appeared outside of the outer weapons pylon under the right wing, or sometimes under both wings.

218, again an A-4E, but with avionics pack.

235 is also an A-4E, similar to 218, however note the difference in both the location and style of the aircraft number.

168 is an A-4H in standard markings. Compare with 17 described earlier.

274 is an A-4H similar to 168 except the number is on the nose. Again note the different type of antenna behind the cockpit.

725 is an A-4H with the avionics pack. This aircraft has had its armament modified so the guns are now located under the wings as on the A-4N. Note the armament panel on the nose-wheel door. Of interest is the unusual style of the ejection warning triangle, which has a wide white border.

272 is an A-4H in markings of the late 1970's. This aircraft saw action during the Yom Kippur War (October 1973) when it was numbered 772, then appearing on the nose only. During the war, it was credited with the destruction of an enemy ship. A silhouette of this appears on the access panel on the nose. Sometime after the war, the aircraft went through a repaint and modification program. The aircraft number was also changed to 272, later repainted on the base of the fin. From experience gained during combat, Skyhawks were modified with the extended exhaust pipe. The rudder is insignis blue and white. Note the different style between the numbers on the nose and fin.

605, like many A-4E was modified and updated during the 1970's. This aircraft has been brought up to A-4H/N standards. Note the extended exhaust, the additional antenna on the nose forward of the cockpit (common to all updated A-4E), and the larger pod under the nose. The style of the intake warning triangle is uncommon.

Fuel tanks are gloss white. Rudder is blue and white. Left and right side profiles are illustrated here.

610 is another updated A-4E like 605, but with the addition of a cranked refuelling probe like on the A-4N and ECM pod on rear fuselage just above the drogue pod. Tip of fuel tank is blue. Rudder is probably yellow.

608 is another updated A-4E with the blue and white rudder and blue tipped fuel tank. Aircraft number has not yet been added to the fin.

632 is an A-4H in similar markings to 608. However, note the location of the national insignia and the incorrect angle of the star.

684 is an updated A-4E, although lacking in an avionics pack. Note the absence of the small pitot tube usually located forward of the nose antenna. The aircraft number has not yet been added to the fin. The refuelling probe is cranked and, therefore, not visible. A-4E in this configuration have been operating with the Israeli Air Force into the 1980's.

322 is a standard A-4N. Note the two warning triangles below the cockpit and the style of the gun-blast panel. Fuel tank is gloss white. The national insignia is located under the wing outboard of the outer pylon on the right side only.

323, an A-4N modified with the extended exhaust. Rudder markings are red and white. Aircraft number was later added onto the nose.

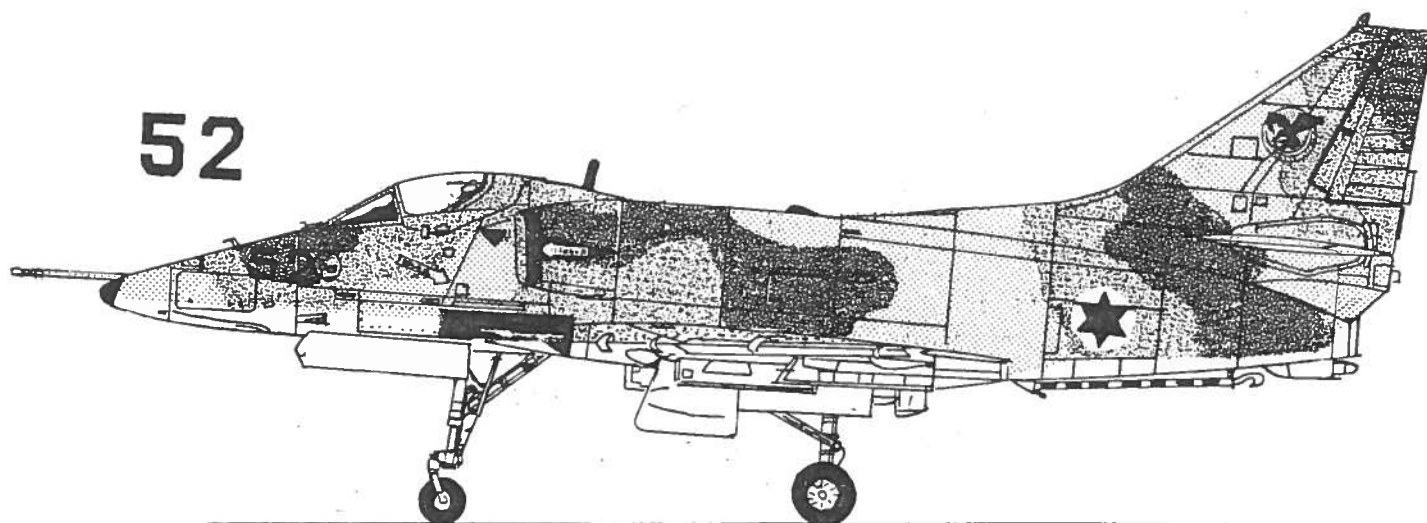
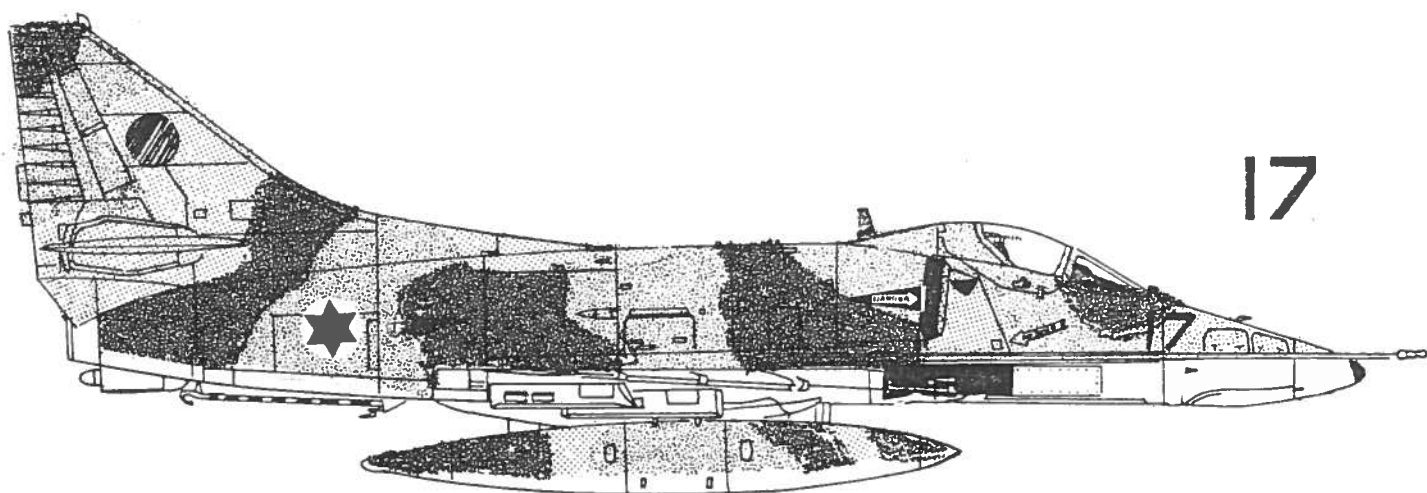
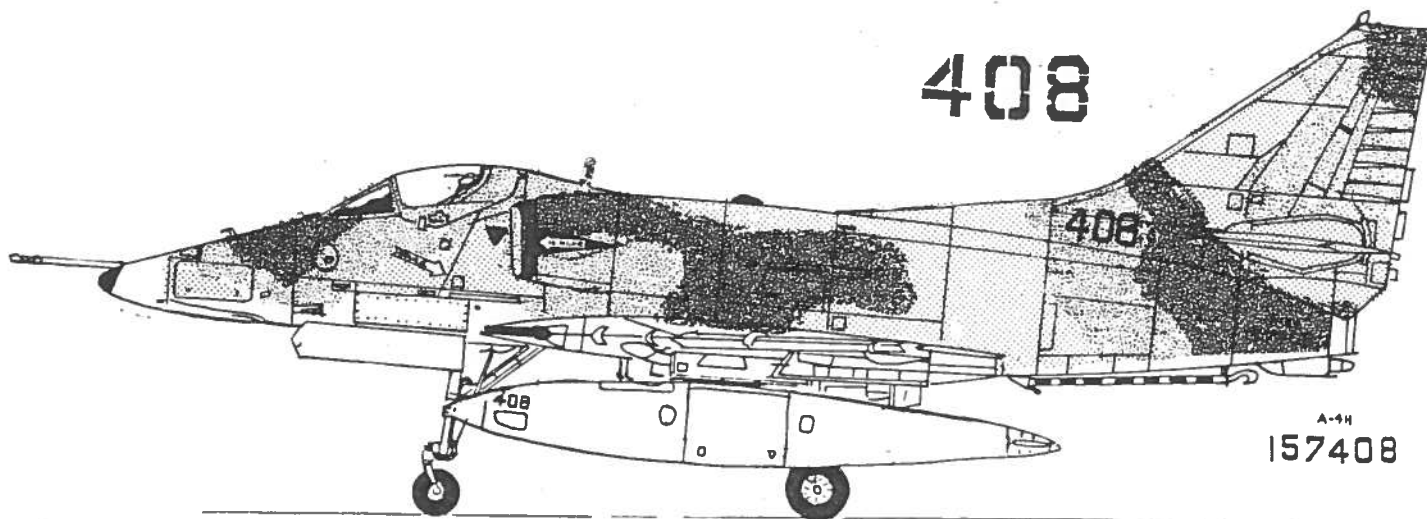
346, an A-4N, similar to 323 except for the different location of the national insignia.

Notes on the artwork: The proportions of the extended exhaust on the profiles are not to scale and should not be used as a scale guide when converting a 1/72 scale kit. Instead, the detail drawing in 1/48 scale should be used to obtain proper dimensions. Photographic references should be used, whenever possible. Also, the antennas marked in black are, in fact, dark-gray; while those shown as white are light-gray.

Modelling an Israeli A-4 Skyhawk.

1. Note the two styles of antennas located in this position.
2. Position of the national insignia varies. The diameter of the star was reduced on later and updated models.
3. Position of this vent varies: (a) On A-4H and A-4N; (b) standard and updated A-4E (610 is an exception).
4. Red anti-collision light.
5. Paint this striped area in off-white on A-4N.
6. Style of antenna on A-4H/N painted in camouflage.
7. Paint this area natural metal on A-4N.
8. Note the number and style of tabs on the rudder and rear of fin.
9. Retain on standard A-4E/N. Remove for A-4H as well as most others with the extended exhaust.
10. Standard exhaust. See detail below for the extended exhaust retro-fitted to all Skyhawks.
11. Drogue pod standard on A-4H/N and updated A-4E.
12. Vent on standard A-4E. Remove for all other variants.
13. Tail arrestor hook with black/white stripes on all A-4.
14. Position of Defa 300-mm wing gun. On updated and N models located under the wing.
15. Retain this antenna on all A-4E/N, but remove for A-4H.
17. Retain on all A-4E/N, but remove on A-4H.
18. Straight refuelling probe used on A-4E/H. Bent probe used on A-4N and some updated models. Painted in camouflage colours.

(Continued on page 66)



GREEN

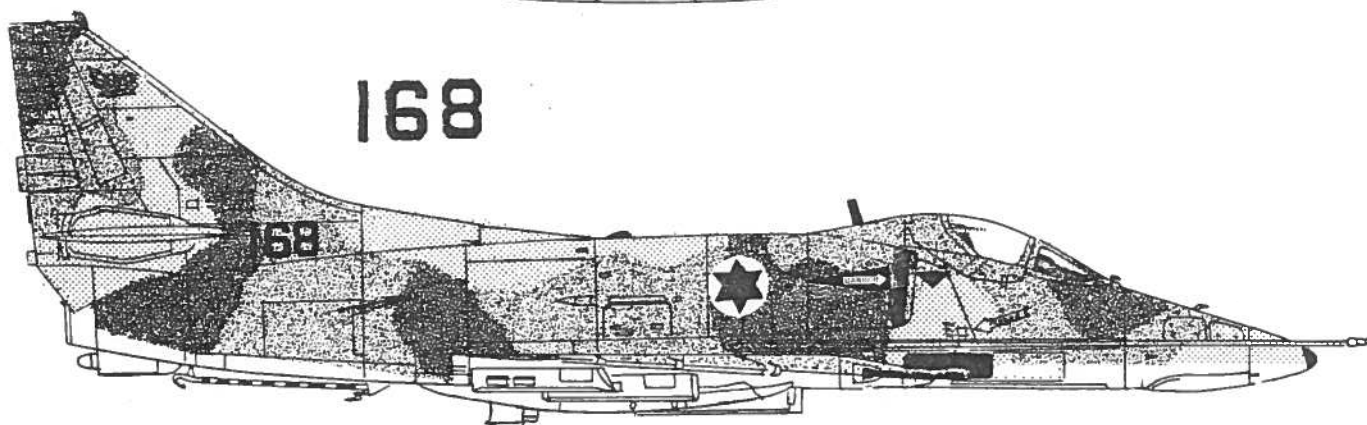
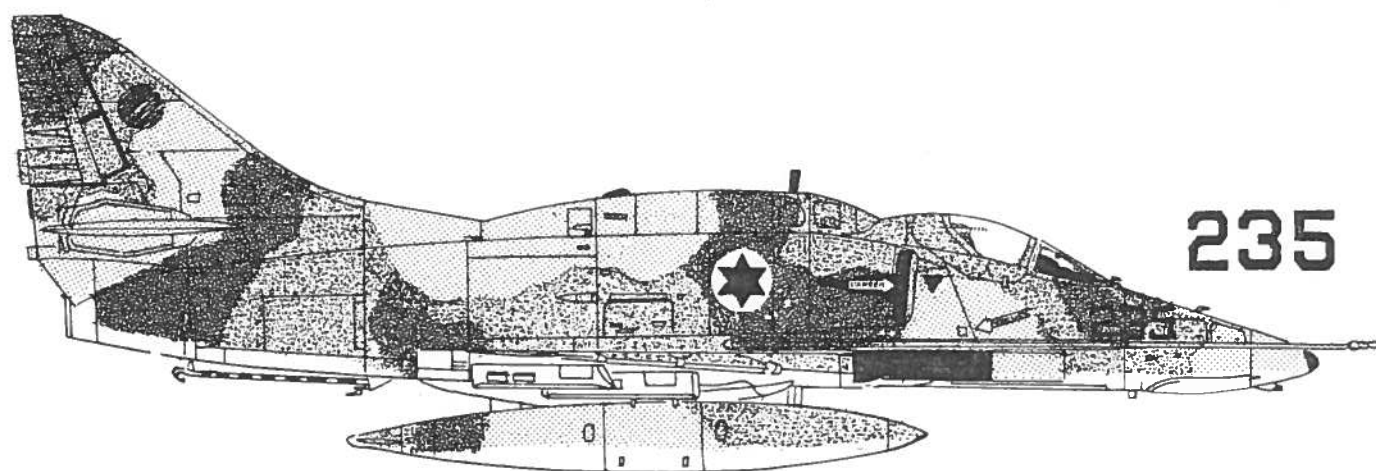
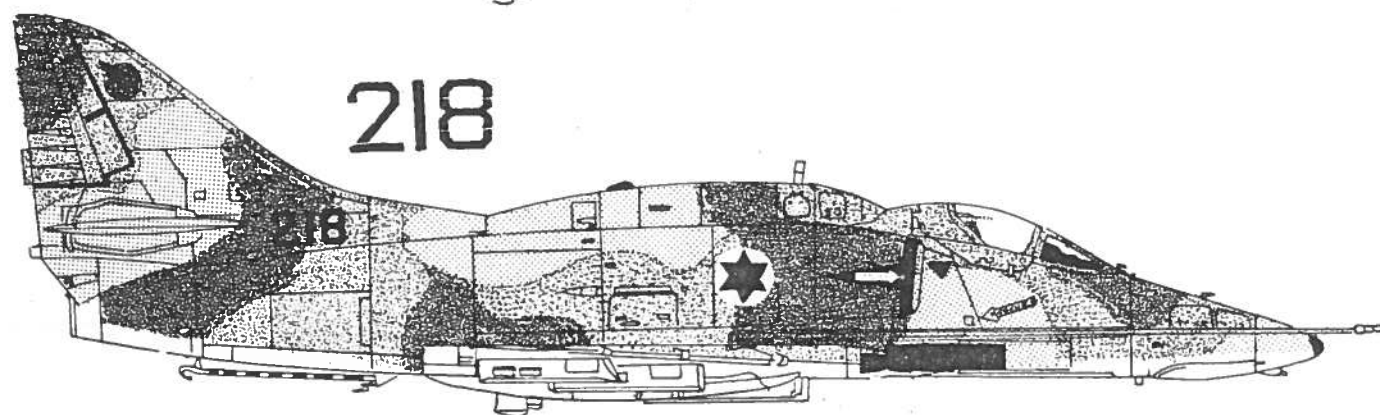
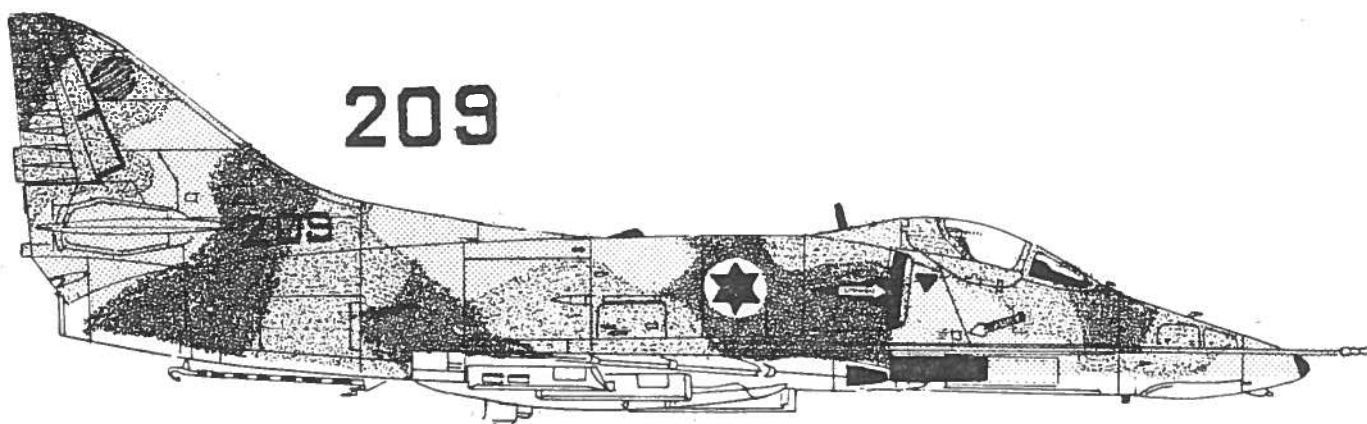


TAN

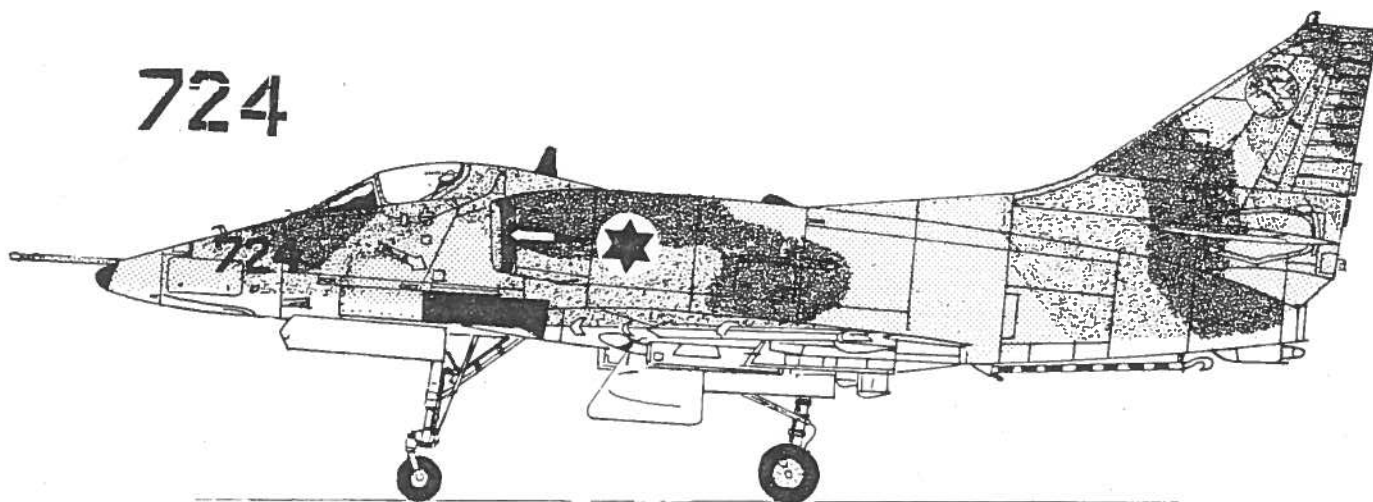


SAND

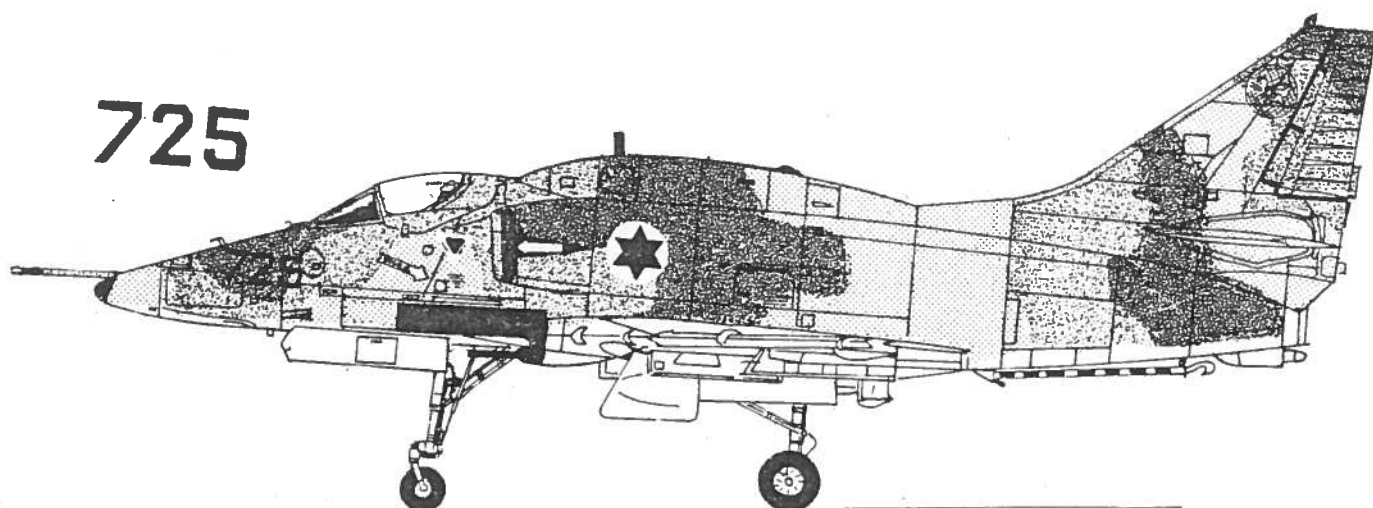
UNDERSURFACES
PALE BLUE



724

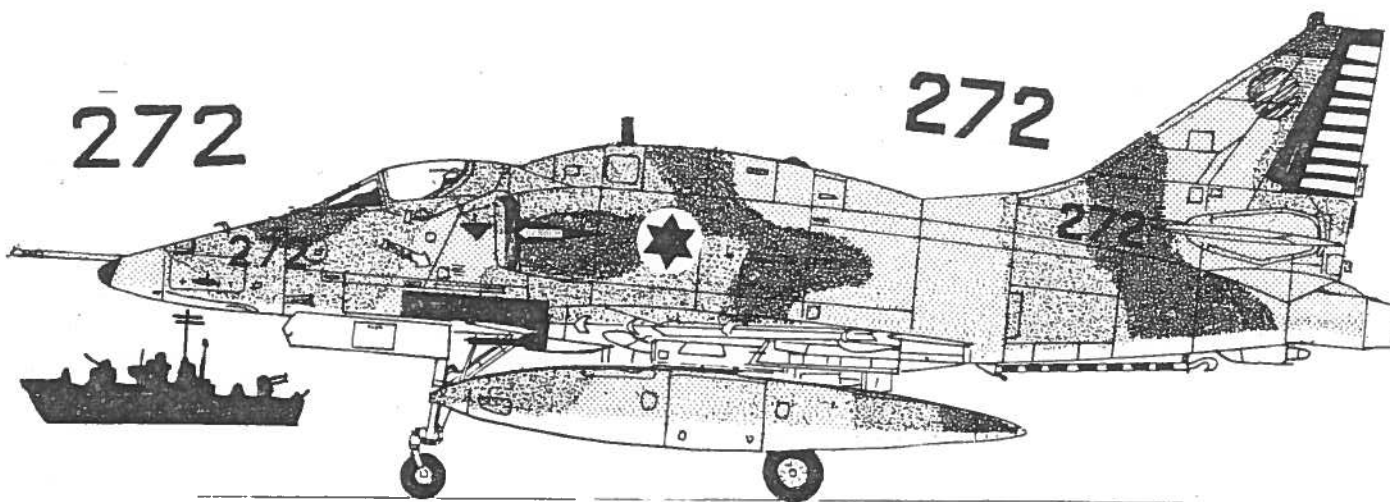


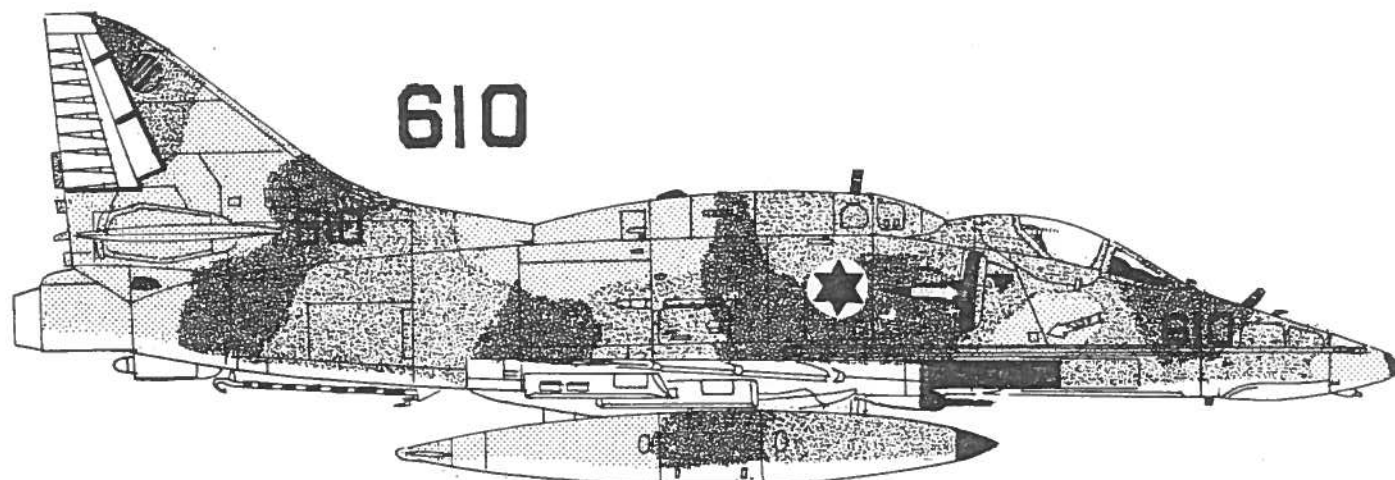
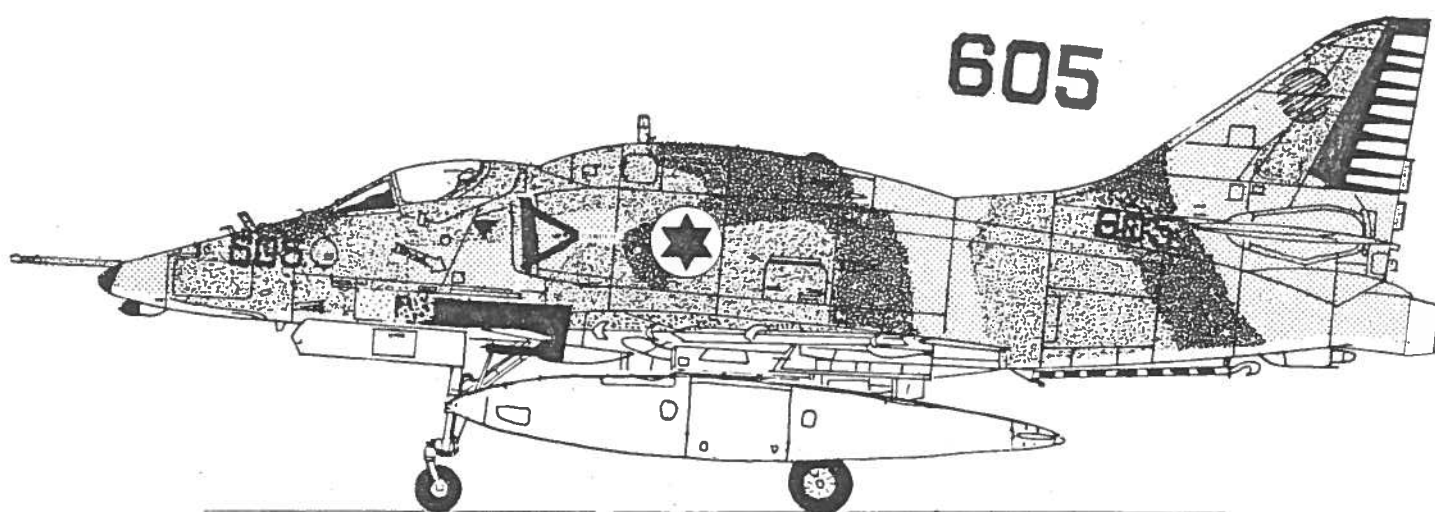
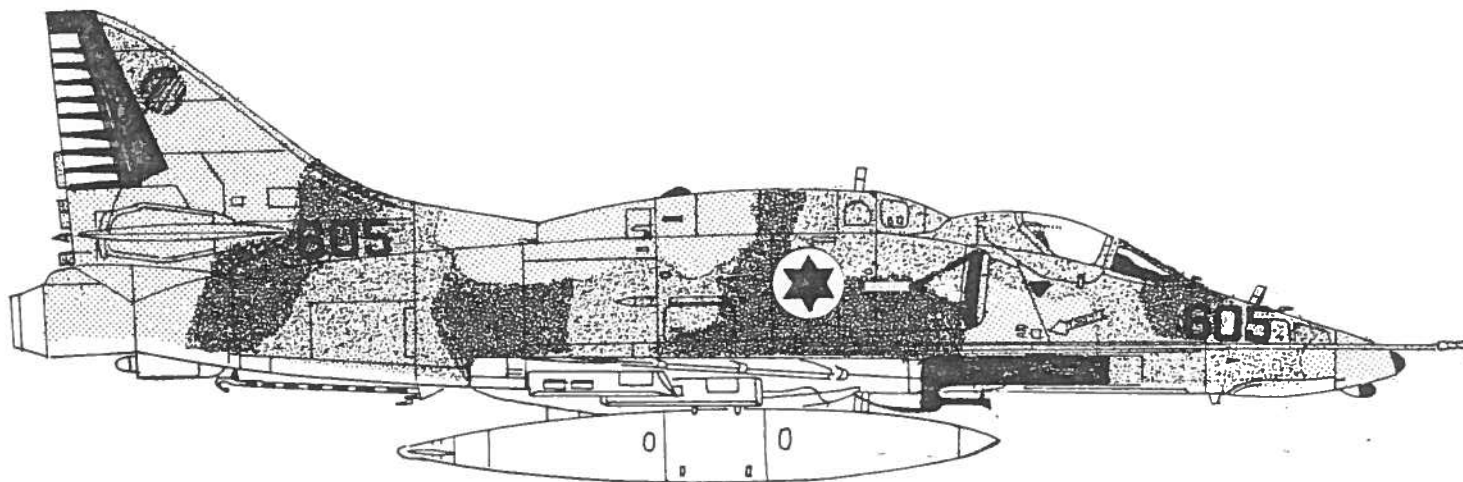
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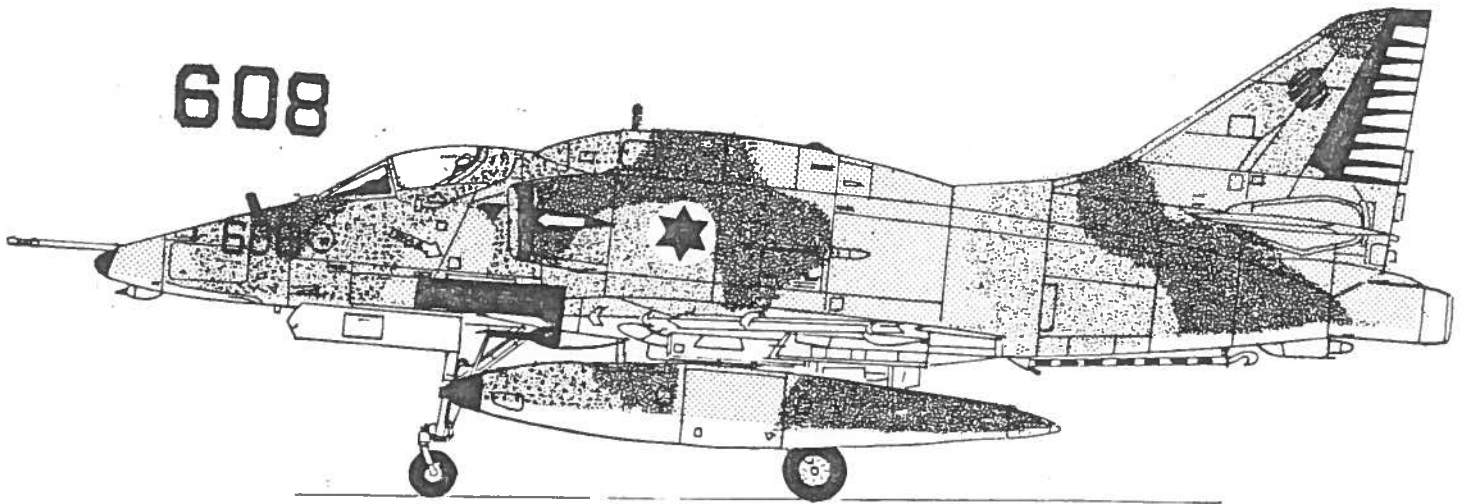
272

272

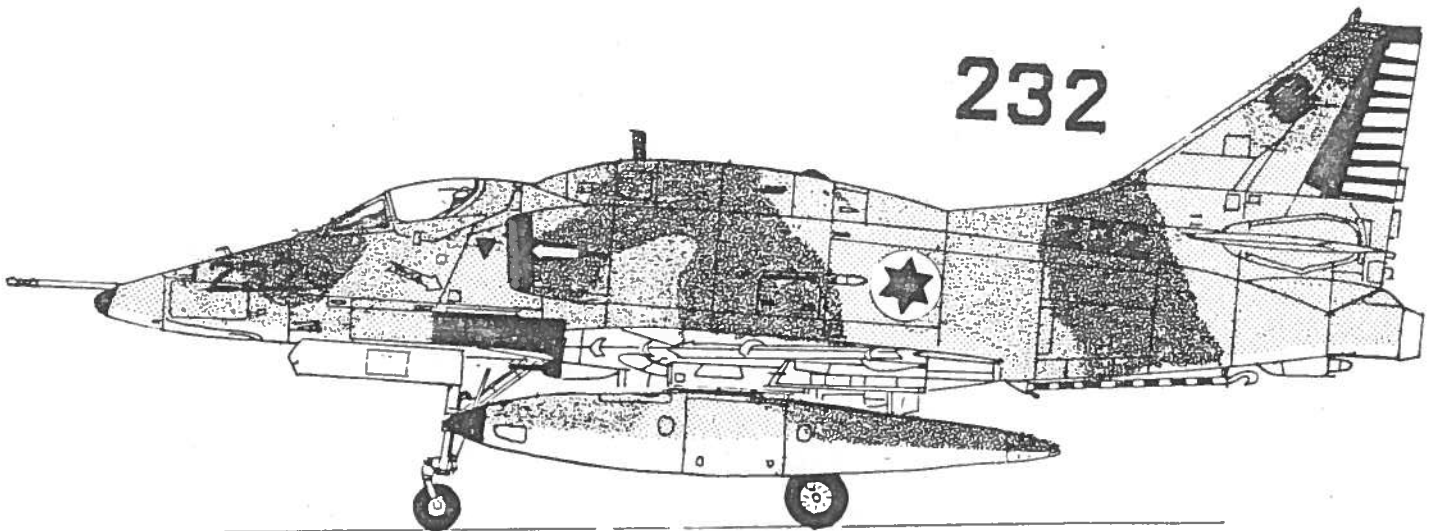




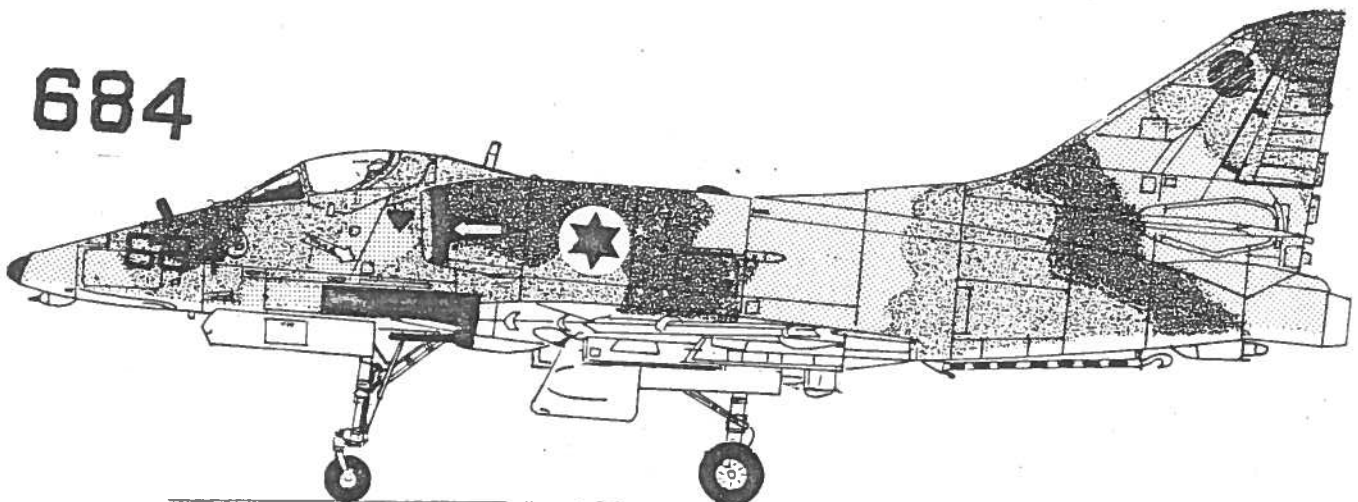
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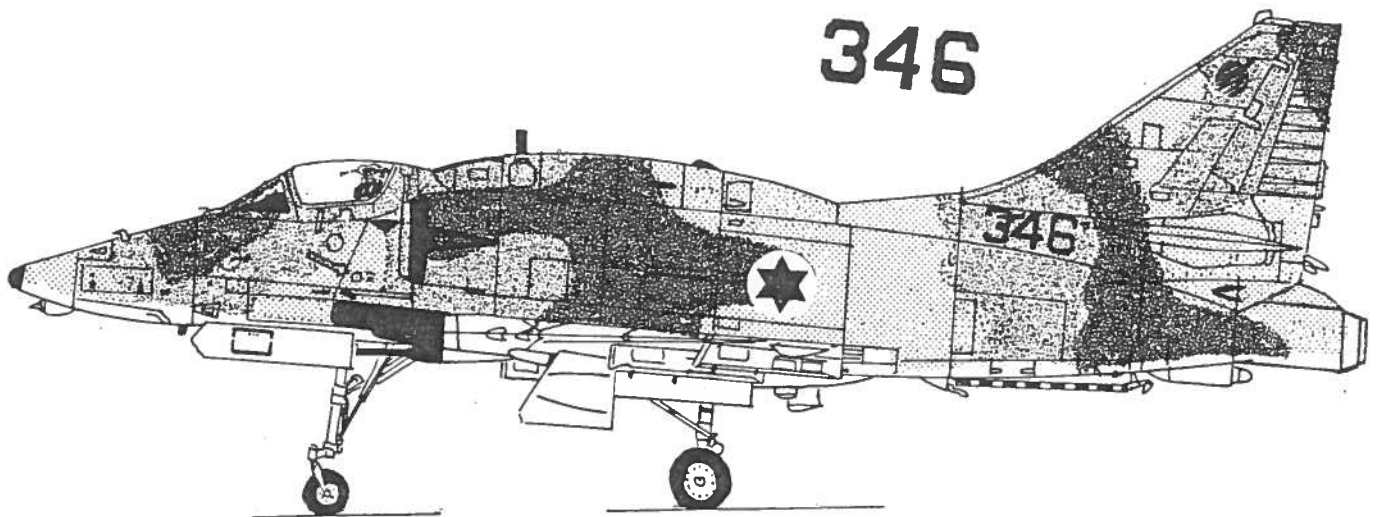
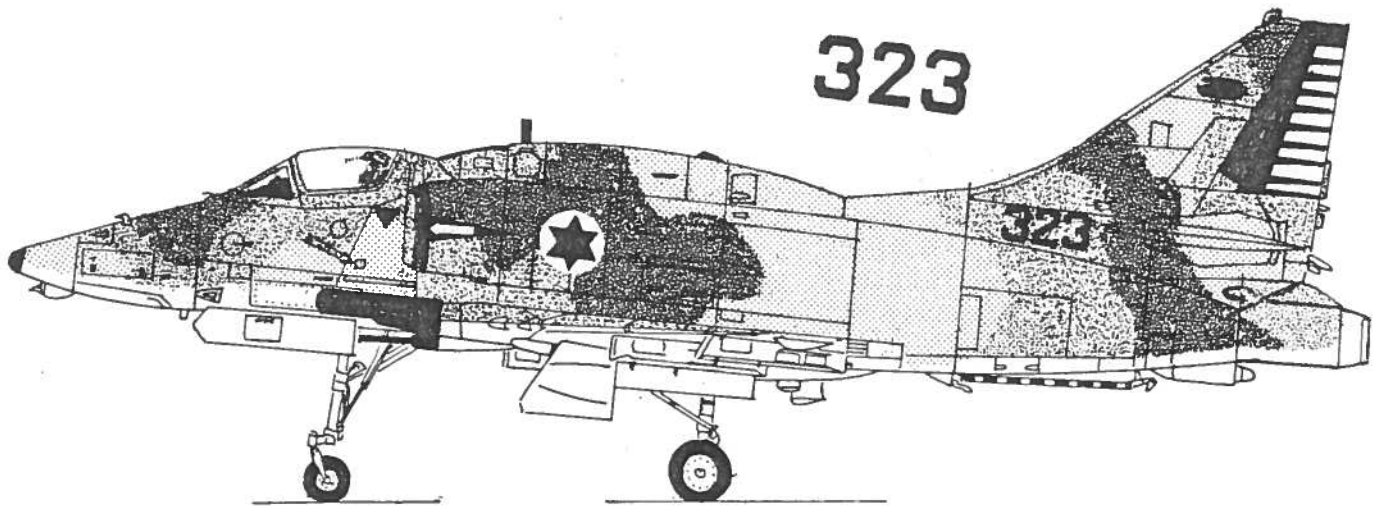
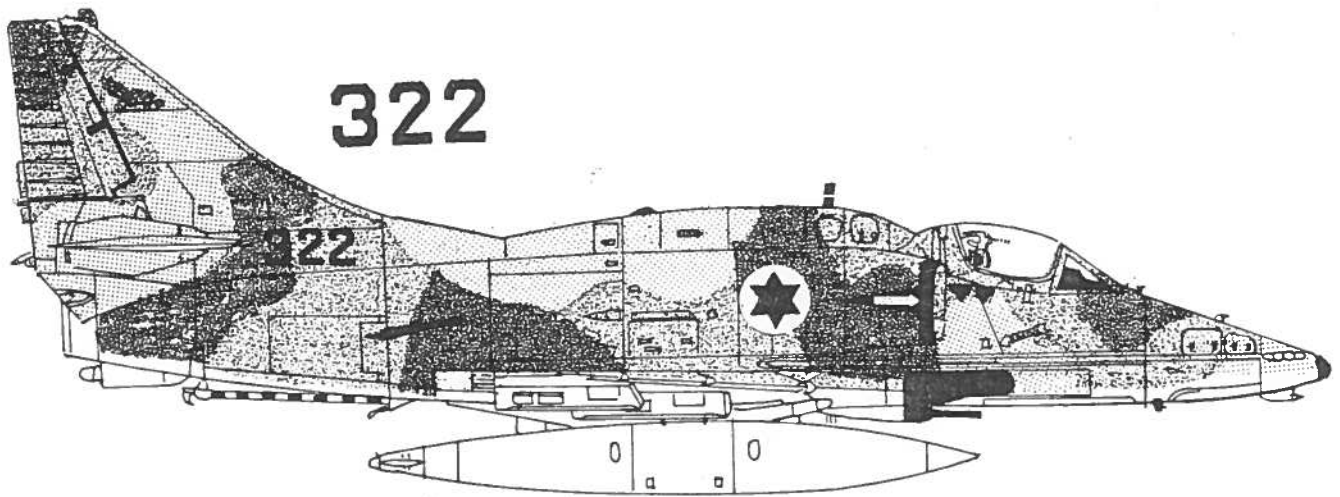


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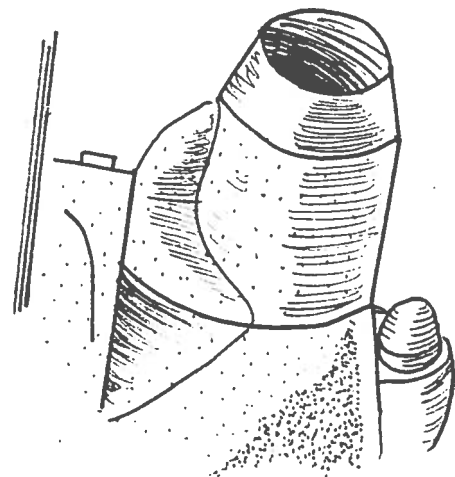
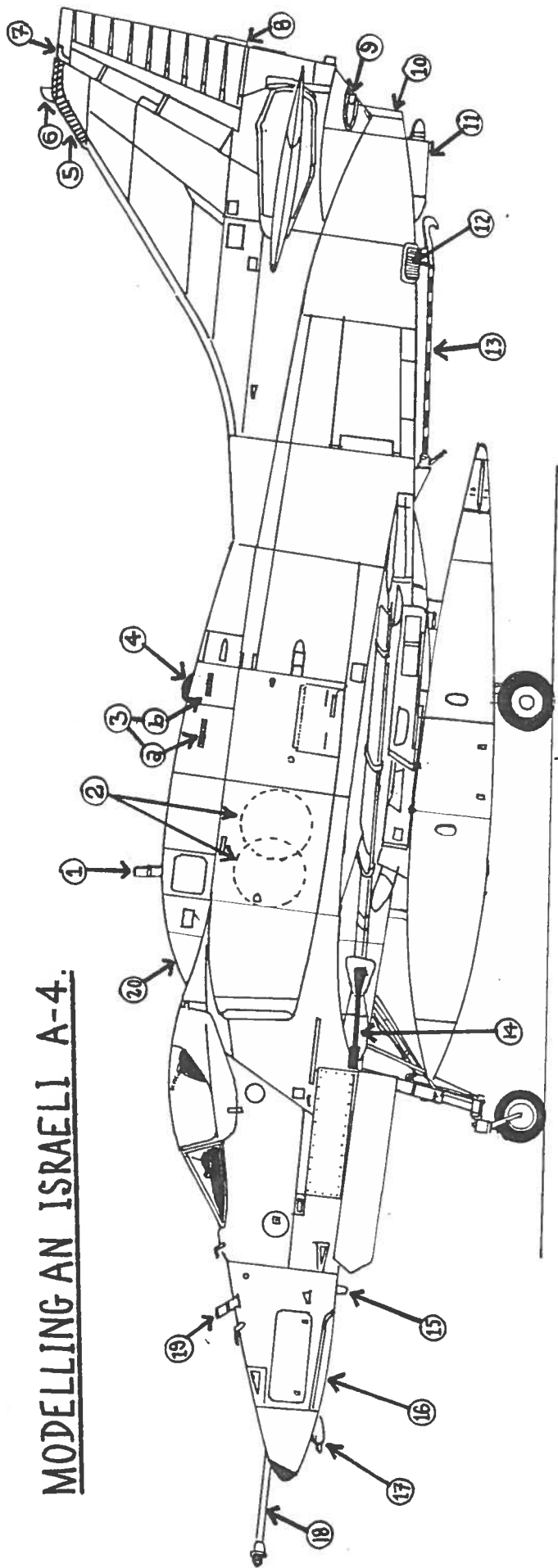


684

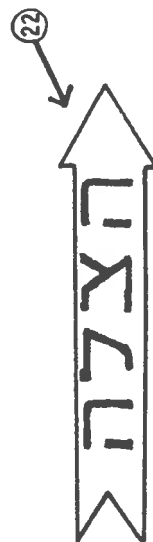
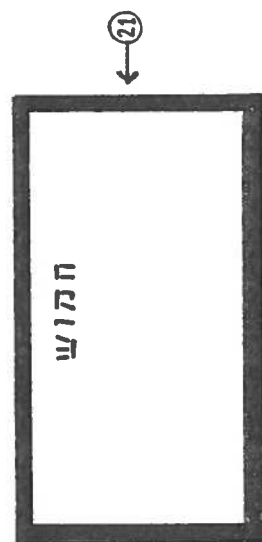
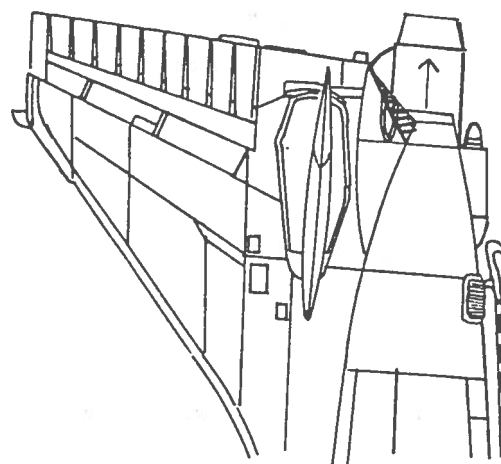




MODELLING AN ISRAELI A-4.



23



AUSTRALIA

APMA (Australian Plastic Modeller's Association, PO Box 51, Strathfield, N.S.W. 2135)
3 81 (20 pages). "Prominent Bristol" 5 side-view drawings of RAAF Beaufighters.

AUSTRIA

NACHRICHTEN (Oesterreichische Flugzug Historiker, Kannwegasse 1/15, A-1150, Wien)
3/81 (39 pages). "Josef Sablatnig: Flugzeugkonstrukteur u. Testpilot" 10 pages including 2 pages of 1/72-scale drawings of Sablatnig SF 5 and one page of 1/72-scale drawing of Sablatnig KE 2. "Der DFS Habicht" 2 pages including one page of 1/72-scale drawing. "Die Fliegerkompanien des Slowenischen Nationalrates (Narodni Svet) in den Kampfen der Jahre 1918-1919" 4 pages including 8 side-view drawings of Brandenburgs, Bergs, & Albatros in Slovenian markings. "Die Fliegertruppe in der 1. Republik, 2. Teil" 16 pages including 23 side-view drawings of a/c in Austrian markings.

BELGIUM

KIT (IPMS Belgium, Rue des Eburons 35, 1040 Bruxelles; 4 issues for 400 Belgian francs.)
#42 (32 pages) "Belgians Do 27" 5 pages including a one-page scale three-view and 13 photos. "Siai Marchetti 260" one page of 1/72-scale drawings of Zambian, Irish, and Singaporean aircraft. Side-view drawing of Dutch Tracker.
#43 (36 pages). "Gloster Meteor F.Mk.4", 29 pages including 20 photos of Belgian a/c, histories of all Belgian a/c, 10 pages of drawings of Belgian, Danish, Egyptian, Argentine, and RAAF a/c, and 4 pages of drawings of details. One-page drawing of Norwegian Sea King.

BRAZIL

SOUTH AMERICAN AVIATION NEWS (Caixa Postal 5216, 09720 Rudge Ramos, Sao Paulo; 6 issues for \$7.00; back issues US \$2.00 each.)
#31 (28 pages). "The History of the Esquadrilhas de Reconhecimento e Ataque", 4 photos and one-page drawing of Brazilian T-6D. Photo: Brazilian AF Puma CH-33 8702.

CANADA

HIGH FLIGHT (Box 393, Stittsville, Ontario K0A 3G0; 6 issues for CAN \$15)
2/1 (40 pages) "Chronology 1925" 12 photos of Curtiss HS2L, Viking, Avro 552, Vedette, Avro Wright, & Varuna. "Avenger - Part II" 15 pages including an outstanding discussion of the detailed differences between the six versions used by the RCAF as well as a complete description of the colors and markings; illustrations include 28 photos, 3 pages of line drawings, & a 2-page 6-view drawing of '805'. (This article sets a high standard for completeness and clarity for all authors of aviation articles.) "Air/Sea Rescue Pilot" 9 pages including 21 photos of a Canadian airman's participation in air/sea rescue operations in the English Channel during WW II. "Four Weeks in June" 6 pages including 15 photos describing 162 Sqd. (RCAF) Catalina's sinking of 5 U-Boats in June 1944. "Winter's Tails" 11 outstanding photos of RCAF a/c in the snow. (The selection of photos in HIGH FLIGHT continues to amaze me. Almost every one shows not only an a/c but the environment in which it existed. Ideal for diorama ideas or just good to look at.)

RANDOM THOUGHTS (IPMS CANADA, Box 626, Stn. B, Ottawa, Ontario K1P 5R7; 6 issues for CAN \$11.00)
3/81 (24 pages) Nothing of saf interest.

ENGLAND

MAGAZINE (IPMS ENGLAND, Flat 4, 18 Delancey St., London NW1 7NH; 6 issues for US \$20.00)
9/10 81 (20 pages) Nothing of saf interest.

MILITARY AVIATION REVIEW (East Cliff, Stotfield Rd., Lossiemouth, Moray IV31 6QT, Scotland)
8/9 81 (48 pages) Photos: Turkish F-104S 9-903, F-4E

1-229; Jordanian F-5E 1161, C-130H 345; Norwegian F-16A 283; Spanish F-27MR D2-03; French Falcon 10 143; Polish Spitfire V RF-E; Irish Seafire 149; Spitfires: Denmark IXE 407; Norway IX FN-C; Thailand PR.XIX PS889; Ireland T.9 161; South Africa XVI 5621; RNZAF Seafire; Belgium XIV IQ-O, IQ-R; RAAF Sunderland RB-S. "The RAAF in its Diamond Jubilee Year" 9 pages including 12 photos. "A History of the Royal Malaysian Air Force" 3 pages including 8 photos (Provost FM1044, Pioneer FM1016, Twin Pioneer FM1061, Dove FM1053, Heron FM1054, Caribou FM1111, Herald FM1022, Sabre FM1359). "Aeronavale" one page of 8 photos (Grumman JRF-5 14 & 078, SNF-5 19, F6F-5 20, SB2C-5 6, P5M-2 146441, S-55 26, HUP-2 130081). "The Putzer Elster" 3 pages with 7 photos of a little known Luftwaffe light aircraft.

FINLAND

MALLARI (IPMS FINLAND, PL 798, SF-00101 Helsinki 10)

FRANCE

LA VITRINE DU MAQUETTISTE (IPMS FRANCE, 3 rue de l'Amiral Roussin 75015 Paris; 4 issues 45FF surface, 60FF air; back issues 12FF; "La Lettre de l'IPMS" 25FF.)

GERMANY

MITTEILUNGEN (IPMS GERMANY, Oertzenweg 12b, 1000 Berlin 37; DM 42.00 Europe, DM 49.00 USA, DM 55.00 Japan, DM 61.00 Australia)
11 81 (30 pages) Nothing of saf interest.
12 81 (30 pages) Nothing of saf interest.

ITALY

IL NOTIZIARIO (IPMS ITALY, CP 182, 41100 Modena Ferrara)

JP-4 (CP 1550, 50100 Firenze)

Jul/Aug 81 (88 pages) Photos: Islamic Iranian Air Army CH-47C 5-4012 (color). Color drawing of Sabres - all camouflaged: SAAF 352, South Korean 25061, Japanese 92-7938.

Sept. 81 (132 pages) Photos: Algerian AN-12 '7T-WAC', French Navy Piper Navajo '906', Islamic Republic of Iran Navy SH-3D '318', Angolan An-26 'D2-EPG', Swiss PC-7 (color), Turkish TF-104G '9-279' (color), Canadian CD-104D (color). "Ancora sul Tornado" one page of color drawings of German, Italian, & English Tornados.

NEW ZEALAND

SCALE DIMENSIONS (IPMS NEW ZEALAND, 72 Walworth Ave., Pakuranga, Auckland)

NORWAY

LIMTUBEN (IPMS NORWAY, c/o K. Haugen-Nes, Postboks 273, 2050 Jessheim, NORWAY; 4 issues for \$9.00.)
1 81 (24 pages) Photos Norwegian F-16, Lynx, P-3B (color), & Falcon 20C (color).

SOUTH AFRICA

AFRICAN AIR REVIEW (AVIATION SOCIETY OF AFRICA, PO Box 1413, Alberton 1450; 6 issues for £ 5.50)
May/Jun 81 (24 pages) Photo: Angolan Troopship T-101.
Jul/Aug 81 (24 pages) "SAAF Lodestars" history and list. Photo: Mocambique MiG-17 (Pilot defected to South Africa; all-over light-blue/grey with red '21' on nose and roundels on tail fin and upper mainplanes. No colors given from roundel, but photo shows a light triangle, point up, inscribed within a dark disk; a light circle in inscribed within the triangle and within this circle is an undecipherable design in white.) Photo: Zimbabwe Cesna F337 Lynx 3417 (Pilot defected to South Africa. No markings visible other than '3417' on vertical fin.)

SWITZERLAND

VIRUS PLATICUS (IPMS SWITZERLAND, Olivenstr. 2, 9320, Arbon)
3 81 (30 pages) "Alouette III in der Schweiz" 5 pages including 3 photos and 4 side-view drawings (HB-XFF,

(Continued on page 57)

dehavilland moth

RAAF & RNZAF

(Editor's note: While combat aircraft justifiably receive the greatest attention from aviation enthusiasts, training aircraft can not be ignored. For the historian, the role of the trainer in forging the instruments of air power (men) is obvious. For the modeler, training aircraft offer an opportunity to finish a model in colorful and usual markings. For the small air forces enthusiast, these attractions are enhanced by the fact that most training aircraft appear in the markings of a bewildering number of small air forces. While not built in the greatest numbers, nor serving with the greatest number of different military services, the deHavilland Moth represents training aircraft as well as most, and, in terms of grace and beauty, better than many. With this article, Tom Young (SAFCH #56) begins a series on the DH 60 Moth and its variants in the colors and markings of the small air forces. Anyone with additions or corrections should communicate directly with Tom Young, PO Box 159, Olema, CA 94950.)

TYPE IDENTIFICATION

DH.60X Cirrus Moth: Most identifiable feature is the Cirrus engine with rounded nose, no spinner on prop.

DH.60G Gipsy Moth: Fabric covered upper fuselage, rounded cockpit coamings, wooded tail skid.

DH.60M Metal Moth: All metal fuselage with obvious stringers, squared cockpit coamings, metal sprung tail skid.

Moth Trainer: (not illustrated) Metal Moth with modifications to allow quicker exit from front cockpit. Rear lift wire attachment moved to forward wing root, deeper doors, and the exhaust pipe directed forward then down to exhaust under the nose.

DH.60G-III Moth Major: Most obvious feature is installation of 120 hp Gipsy III inverted engine, cowled very much like Tiger Moth. Squared cockpit coaming, usually split axle, and metal sprung tail skid. Deeper doors cut into cockpit sides.

In addition to the above features, the modeler should be aware of many individual features on any given aircraft. The first Moths and possibly some of the impressed machines did not have wing slats. Exhaust stacks were sometimes modified with mufflers removed during much of WWII. Two distinctly different types of landing gear were used: straight axle on all early aircraft and most DH.60Gs. The split axle (most commonly seen on the Tiger Moth) appeared on all DH.60M Metal Moths and was retrofitted to many earlier Moths. These two types of landing gear are indistinguishable from each other in side views. Several types of wheels and tires were used. The floats on the Cirrus Moths appear to be different from those on later variants.

ROYAL AUSTRALIAN AIR FORCE

A total of 122 de Havilland Moths served in the RAAF from 1926 until 1945. The initial order for 122 machines began with the Cirrus Moth, powered with the ADC Cirrus Mk.II engine. It is not known how many aircraft were completed as DH.60X Cirrus Moths because the more powerful DH Gipsy II engine was chosen to replace the Cirrus power plant early in the production program.

All Cirrus Moth and Gipsy Moth aircraft were given the RAAF identification number A7, the individual aircraft number being applied after this designation on almost all aircraft. In 1935, the RAAF type numbers were changed, but all Moth aircraft retained their A7 designation.

A total of 95 Moths were in RAAF service during WWII, these included impressed civilian Cirrus Moths, Gipsy Moths, Metal Moths, and Moth Majors. The last Moth was retired in 1945.

ILLUSTRATIONS

(a) A7-13: DH.60X Cirrus Moth, float equipped, of No.

1 FTS Seaplane Training Flight, Point Cook, 1928. Aircraft has wing slats. Natural metal and silver doped overall, black wing, cabane, and horizontal stabilizer struts. Standard national markings applied in six positions plus rudder stripes. A7-13 in black on both sides of fuselage. Photo appears in Ref. 9.

(b) A7-37: DH.60G Gipsy Moth, split axle, low pressure tires, no muffler on exhaust. Paint and markings as for (a) except for varnished wing struts, silver cabane and horizontal stabilizer struts, black wheel hubs. Photo appears in Ref. 7. Ref. 10 has a photo of A7-62, a DH.60M in these markings with all silver struts and wheel hubs. On page 12 of this same book, is a photo of an unidentified DH.60M in this color scheme except with all struts, including undercart, in black. This aircraft carries a large gun camera over the forward cockpit for use from the rear cockpit.

(c) A7-28: DH.60G Gipsy Moth, float equipped, of No. 1 FTS Seaplane Training Flight, Point Cook, 1935. Muffler on exhaust, blind-flying hood fitted. Silver overall with varnished struts. Float struts are black. Two photos in the author's possession were used to execute this illustration. Ref. 8 has a drawing of A7-55 in this color scheme except for black struts throughout. Ref. 3 shows an unidentified DH.60G in this color scheme with black patches at the point where the struts attach to the floats. This photo also appears to show a white outline to the national markings.

(d) A7-55: DH.60G in markings used for 1935 search for missing flyers Lincoln Ellsworth and Hubert Hollick-Kenyon. Flt. Lt. E. Douglas was flying this aircraft when the lost flyers were located. Aircraft is yellow overall with six roundels. Rudder stripes and serial numbers overpainted. All struts black. Ref. 8 has a photo of this aircraft taken during the search.

(e) A7-61: DH.60M Metal Moth, split axle, of No. 1 FTS, Laverton in 1939. Silver overall with varnished wing struts, black cabane, horizontal stabilizer, and undercart struts, black wheel hub, and a black patch just ahead of the tail. Individual aircraft number, in this case '61', repeated in large black numbers ahead of forward cockpit on both sides of the fuselage. Blind flying hood fitted. Ref. 9 has a photo of this aircraft and others with the same color scheme, along with a color side-view drawing. Ref. 10 offers a color side-view drawing and a photo. Ref. 6 has a drawing of A7-74 in the same scheme.

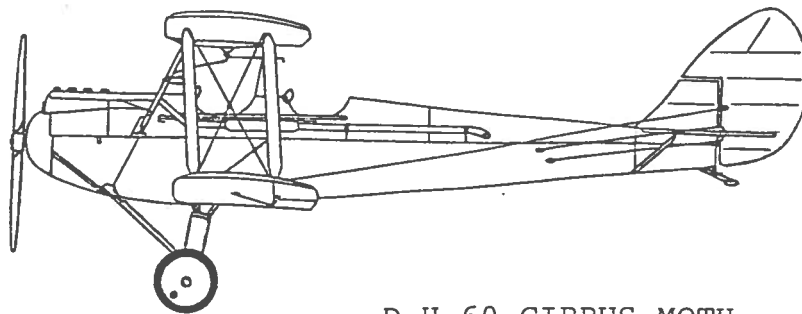
(f) A7-27: DH.60G, split axle, based at Laverton, 1937 markings. Color scheme as for above except no black patch ahead of tail, no blind flying hood fitted, and silver wheel hubs. Individual aircraft number presented in black in normal position, but very large. Ref. 9 has a photo of this aircraft and others in the same color scheme. Ref. 6 has a drawing of A7-40 in this color scheme.

(g) A7-54: DH.60G, float equipped, at Point Cook, 1939. Markings as for (e) but with black float struts and a longer black patch ahead of tail. Ref. 2 shows this aircraft. Ref. 10 shows A7-36 in this color scheme but mis-identified the aircraft as a Cirrus Moth (no black patch ahead of tail).

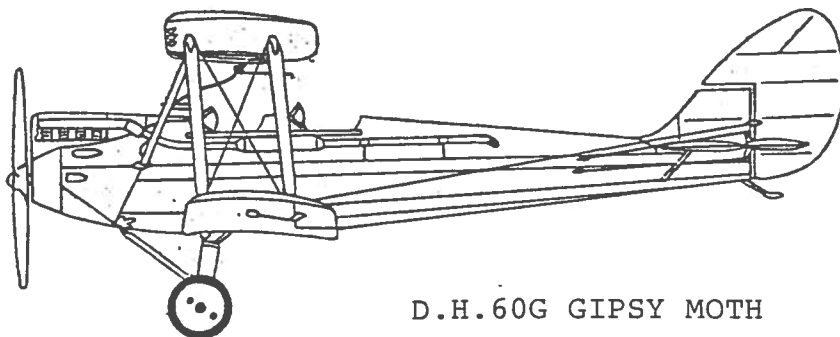
(h) A7-111: DH.60G, float equipped, of No. 3 Seaplane Conversion Flight, 1944. Muffler on exhaust. Angle of photo does not show wing slats. If they were present, it is possible that this was an impressed machine. Camouflage is earth brown/foilage green with yellow undersides. Yellow bands around top wing and around fuselage. Red/white/blue roundels in four wing positions, same outlined in yellow on fuselage. Black a/c markings. Red stripes on float sides for location of beaching gear fittings. Ref. 5 offers a photo of this aircraft.

(i) DH.60G, split axle, instructional airframe seen

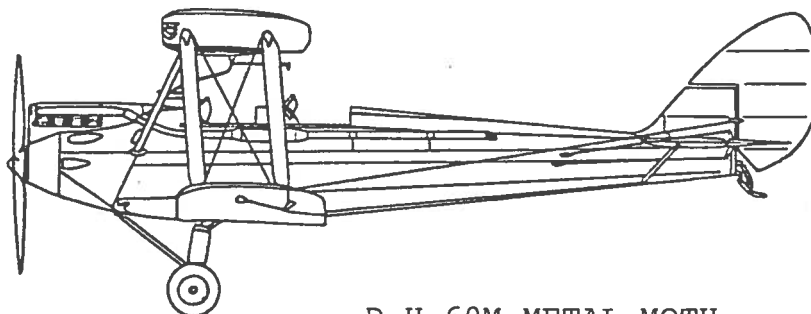
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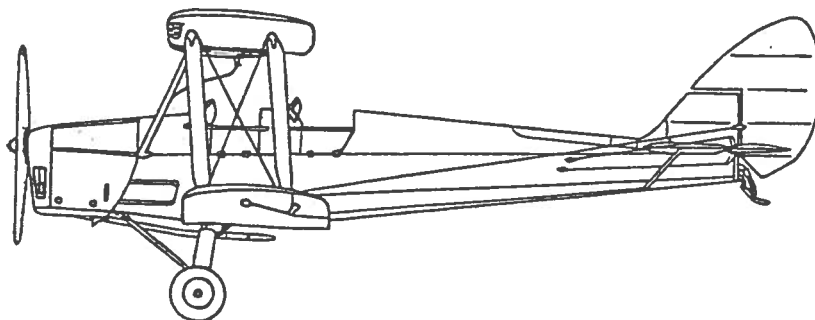
D.H.60 CIRRUS MOTH



D.H.60G GIPSY MOTH

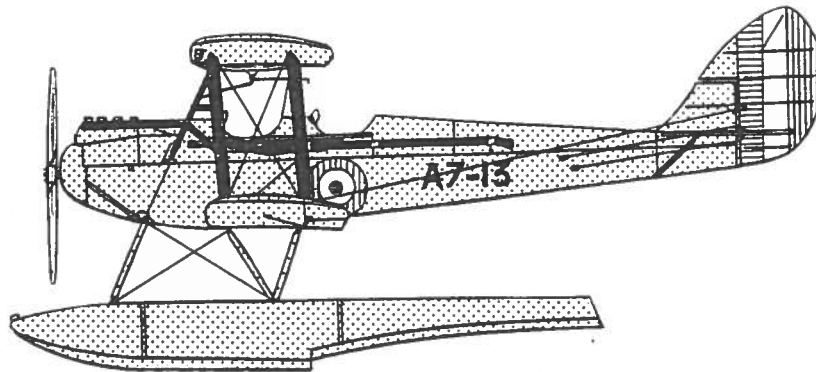


D.H.60M METAL MOTH

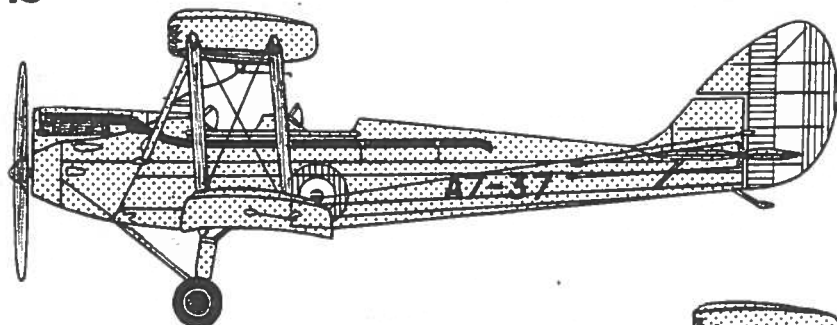


D.H.60G-III MOTH MAJOR

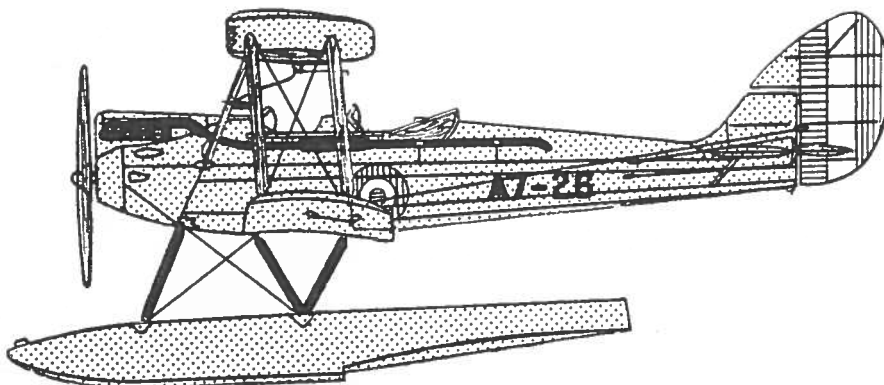
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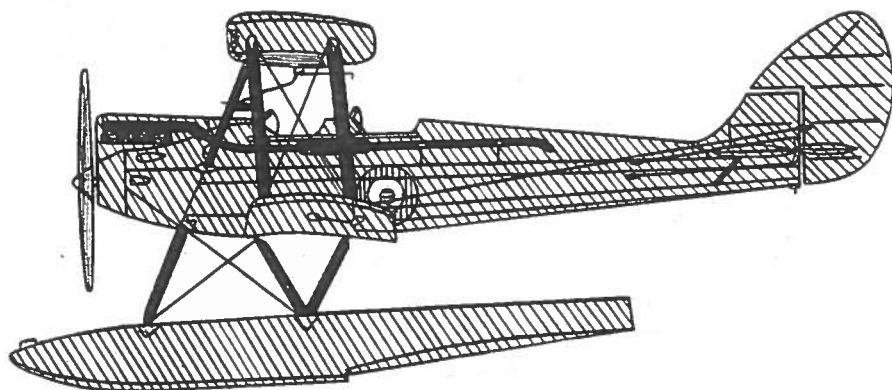
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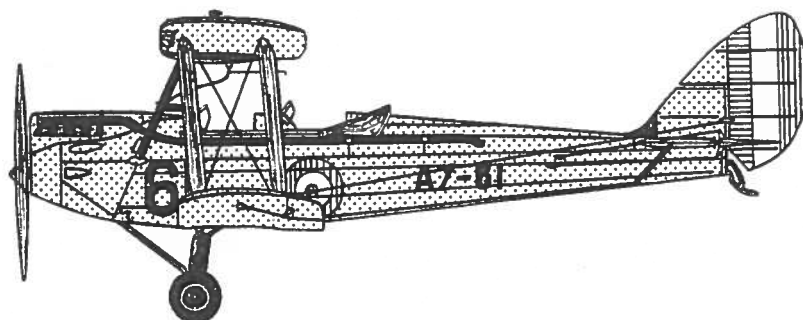
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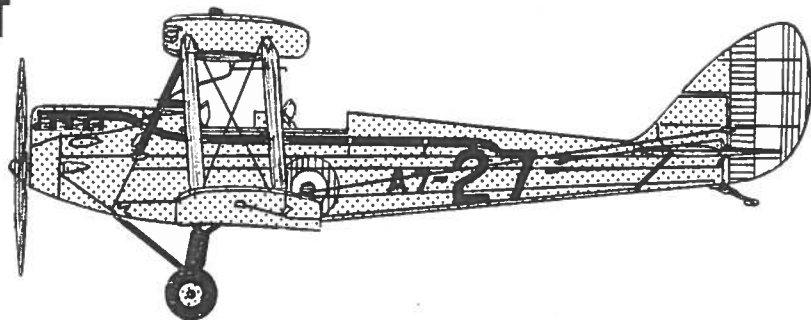
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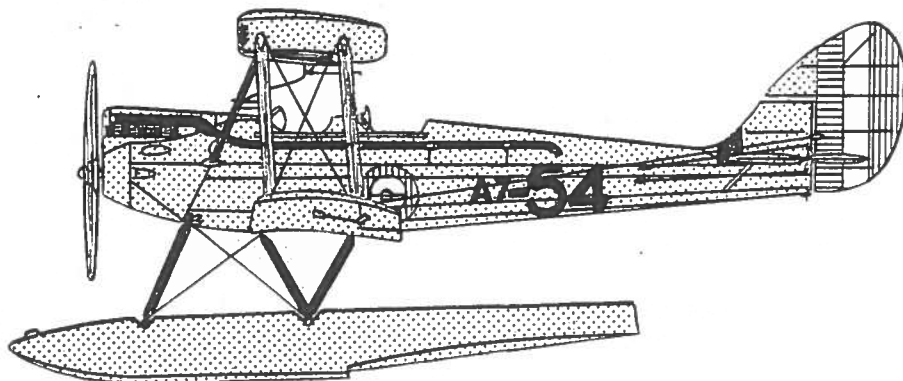
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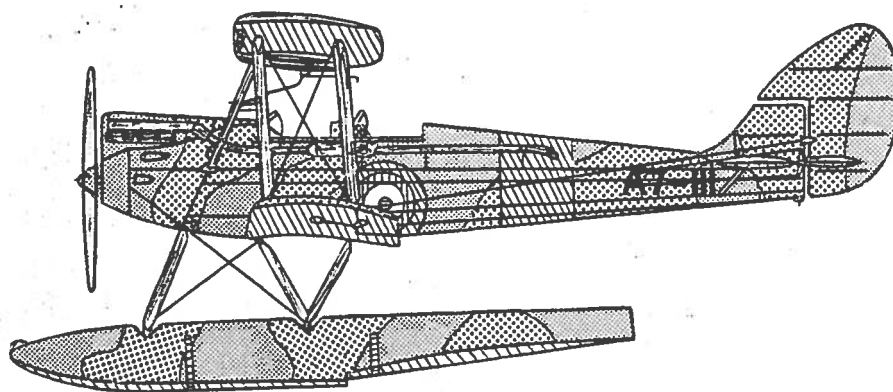
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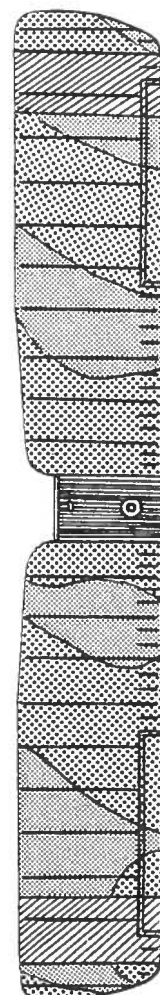
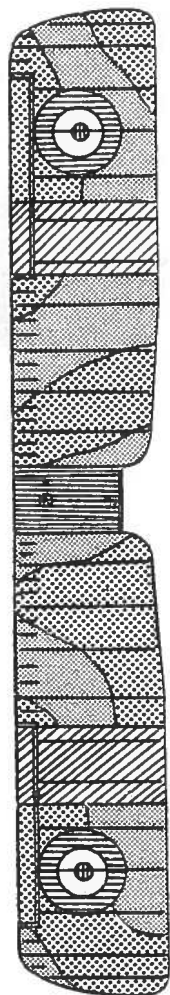
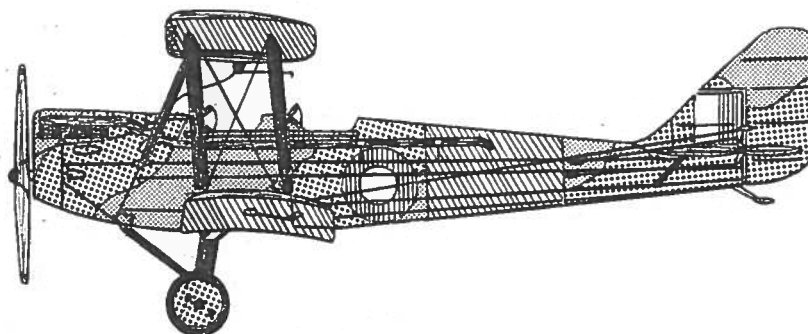
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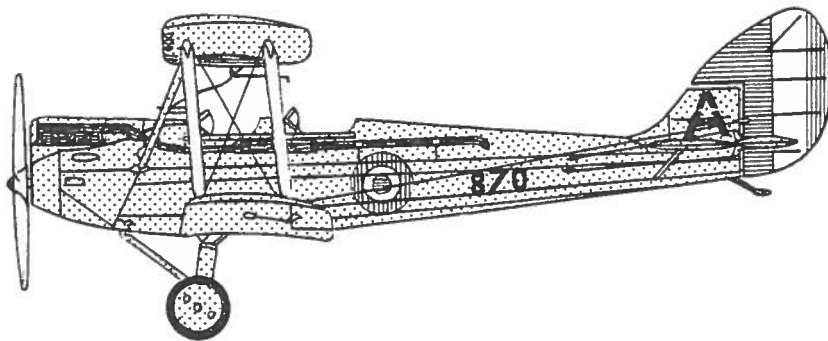


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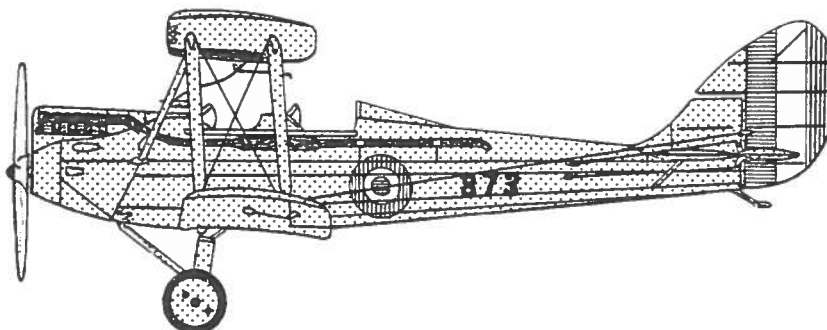
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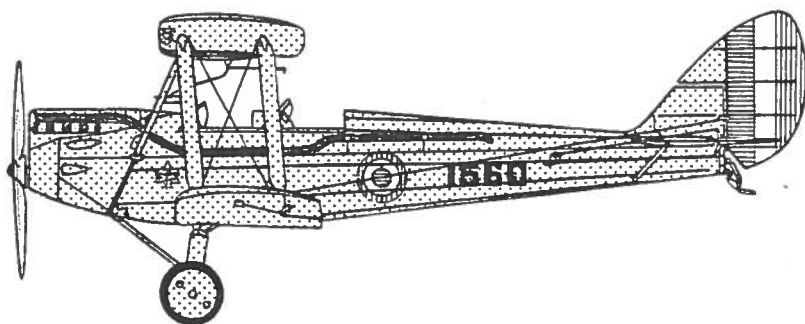


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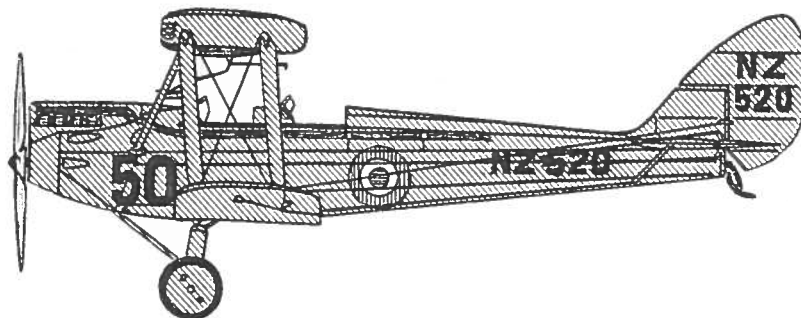
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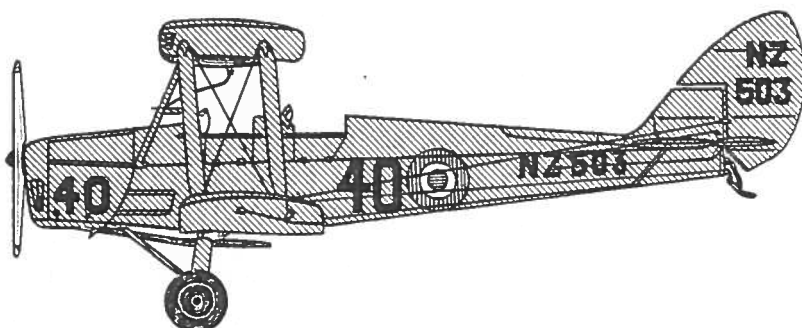
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n



at Melbourn Showgrounds in 1942. Non standard rudder, no identification number visible. Camouflage as for (h) with a very wide yellow band very wide around the fuselage. Yellow bands on upper wing narrower than specifications called for and further outboard, covering roundels. Blue/white roundels on fuselage, blue/white tail flash. All struts appear to be black. Ref. 10 has a photo of this aircraft. While of poor quality, it is the only photo of this color scheme known to exist. Another Moth with unmodified rudder in the same color scheme also appears in the photo.

REFERENCES

1. Aero Modeller, August 1958. Detailed plans of Cirrus Moth, DH.60G, and DH.60M. Straight and split axles illustrated, interior. Available through MAP Plans Package series.
2. Air Classics, September 1971, page 21. Photo of A7-54 on floats.
3. Air Pictorial, April 1969, page 141. Photo of DH.60G on floats, number not visible.
4. American Aircraft Modeler, May 1969, page 42D. Good plans of DH.60G with DH.60M tail strut, wing slats, squared cockpit coamings, split axle, low pressure tires. Composite of DH.60G and DH.60M, possibly drawn from a real aircraft with these features.
5. Aviation News, Vol. 2, #5, page 9. Photo of A7-111 in wartime camouflage on floats.
6. Dirty Plastic (IPMS Phoenix), Summer 1980, page 8. Drawings of A7-40 and A7-74.
7. IPMS Australasia Newsletter, #24, page 13. Photo of A7-37.
8. Modelcraft (IPMS Australasia), #3 1971, pages 10 & 14. Drawing and photo of A7-55.
9. Aircraft of the RAAF 1921-71, Pentland/Malone, pages 17, 26, 29, 37, 41, & 44. Color drawing, five photos of Cirrus Moth A7-13 and many other Moths.
10. RAAF Camouflage and Markings 1939-45 Vol. 1, Pentland, pages 11, 12, 14, 17, 24, & 131. Color drawing, five photos of many Moths including A7-36 on floats and unidentified Moths used as instructional airframes.

ROYAL NEW ZEALAND AIR FORCE

New Zealand operated a total of 28 Moth aircraft from 1929 to 1943. The first four aircraft were DH.60G coded 870-873, replacing Avro 504 in 1929. A fifth DH.60G was ordered in 1929. This aircraft was fitted with floats and, in 1930, was fitted with a Lewis gun. This aircraft, number 995, served in combat in Samoa until March 1930. Two DH.60M were added to the RNZAF in 1930, numbers 1560 and 1567.

In 1936, all Moths except the original 870 were disposed of, 995 having been written off shortly after the Samoan operation.

In September and October 1939, 22 Moths entered RNZAF service. This number included DH.60G, DH.60M, and DH.60-III, one aircraft being originally 1560 (it became NZ520). All aircraft were impressed from civilian sources.

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"My project on the Northrop Delta for HIGH FLIGHT is proceeding very well, and it now looks like at least a two-part article. I still need information about the non-Canadian use of this aircraft, either military or civil, so please renew my appeal for help from SAFO readers."

Carl Vincent (SAFCH #18), Box 393, Stittsville, Ontario, CANADA K0A 3G0.

(Editor's note: I encourage all members with information on the Northrop Delta to help Carl. After the article is published in HF, I will ask Carl for permission to reprint it in the SAFO, so good small-air-force coverage is important. By the way, Carl's new book, "No Reason Why" has just been published. Since it is not of saf interest, it will not be reviewed in the SAFO. However, it should be of interest the many readers: "In 1941, political bungling and military ineptitude led to 2000 Canadian soldiers being sent to the doomed outpost

ces. These aircraft were retired by 1941, except for NZ518 which lasted until 1943.

ILLUSTRATIONS

(j) 870: DH.60G, Wigram, 1929. First Moth to serve with the New Zealand Permanent Air Force. Wing slats, split axle. Natural metal and silver doped overall. Varnished wing struts, all others silver. Black aircraft number and individual aircraft letter (870 "A", 871 "B", 872 "C", and 873 "D"). Roundels in standard six positions, rudder stripes with red leading. On the first four aircraft, the red continued forward to take up the entire rudder. Ref. 3 has photo of this aircraft. Ref. 4 offers a drawing of this aircraft. Ref. 5 has a poor photo of this aircraft. Ref. 6 has a photo of 841 and 843 in this color scheme.

(k) 873: DH.60G, as for (j), but with headrest and pylon behind rear cockpit. Standard rudder stripes, no individual aircraft letter, black cabane struts and horizontal stabilizer struts. Photo in Ref. 1.

(l) 1560: DH.60M Metal Moth, as it entered service in 1930. Silver overall, standard markings with black line following the break between cowling and fuselage. De Havilland crest on forward fuselage. Note exhaust pipe rebuilt lower on fuselage side. Ref. 5 shows a photo of either 1560 or 1567.

(m) NZ520: Same aircraft as (l), ten years later (1560 in 1940, now NZ520). This aircraft had been retired in 1936, only to be impressed in 1939. Trainer yellow overall, smaller wing roundels, 50 in black on cowling. Based at #2 Elementary Flying Training School, New Plymouth. Ref. 4 has a drawing of this aircraft.

(o) NZ503: DH.60G Moth Major, impressed civilian aircraft entering service in 1939, based at New Plymouth. Trainer yellow overall with black a/c numbers. Black individual a/c number 40 ahead of fuselage roundel and on cowling. Ref. 6 has a photo of this aircraft. Ref. 4 has a drawing of this aircraft.

REFERENCES

1. Aircraft Illustrated, November 1972, page 460. Photo of 873 with headrest.
2. Airfix Magazine, February 1972, pages 328-329. Plans and kit conversion for DH.60-III Moth Major.
3. Air Pictorial, January 1968, page 6. Photo of 870.
4. Dirty Plastic, Summer 1980, page 8 and 15. Drawings of 870, NZ503, and NZ520.
5. New Zealand Military Aircraft 1913-1977, Duxbury, et al, page 3 and 19. Photos of 870 and unidentified DH.60M.
6. RNZAF - The First Decade 1937-46, Darby, page 11 and 31. Photos of 871, 872, 873, and NZ503.

(Editor's note: All lovers of lepidoptera should obtain the Summer 1980 issue of Dirty Plastic. This issue contains many pages of Moth drawings. Back issues can be obtained from IPMS/PHOENIX, c/o Pat Fowler, 509 W. El Camino Dr., Phoenix, AZ 85021.)

of Hong Kong. 550 were to die there. For the first time, the full story of why they were there, their heroic fight against odds, and their subsequent shabby treatment." The book contains 300 pages, 11 maps, and 50 photos, and can be obtained from The Hanger Bookshelf, Box 1513, Belleville, Ontario, CANADA K8N 5J2. The price is CAN \$18.95.)

"As a free-lance portrait artist (my main profession is a mechanical engineer for an utility company), I am extending my service to fellow SAFCH members at a special reduced rate. I can do a 12 inch by 16 inch original pencil, pen & ink, or ink & wash portrait of anything (human, aircraft, ship, dog, etc.) from a photograph for only \$30.00 plus postage. This offer is limited to SAFCH members only since I usually charge twice that amount."

D.Y. Louie (SAFCH #544), 5 West Drive, Bayonne, NJ 07002.

LATIN AMERICAN T-33

Since publication of my report on the T-33 in Latin America (SAFO #14), new information has come to light. This update is designed to pass along that information.

Corrections:

Chile was inadvertently left off the list of countries operating the T-33.

At the time the original report was written, there were reports that indicated more than one country operated the RT-33. Now it appears that this information was incorrect and that Columbia was the sole operator of the RT-33 in Latin America.

Only two countries, not "some" operated the T-33A/N Silver Star. These were Columbia and Bolivia.

Further corrections and additions follow by country:

BRAZIL: The FAB recieved a total of 48 aircraft vice 45 as originally reported. Serial range for these aircraft was FAB 4310 through FAB 4367.

CUBA: At least eight T-33's (armed) were in service with the Cuban Air Force. Known serials are: FAEC 701, 703, 705, 707, 709, 711, 713, and 715. See illustration for color information.

COLOMBIA: In 1978, twelve T-33's were refurbished by Evergreen Helicopters, Marana Air Park, Arizona, for the FAC. Serials of these aircraft were FAC 2007A, 2013A, 2014A, and 2025 through 2033.

HONDURAS: It now appears that there were at least two T-33 (not RT-33) aircraft in service in Honduras. Known serials are FAH 200 and 222. (FAH 222 has been reseried FAH 1200.) It has also been mentioned that these aircraft have been used for reconnaissance missions over El Salvador.

MEXICO: Total aircraft received was 15, not "at least 15". Serial range is JE-001 through JE-015. An interesting side note is that according to the Hispanic-American Reports, dated August 1961, Mexico agreed to purchase these aircraft plus 15 Vampire fighters for a total purchase price of \$3,260,000. The article goes on to quote that the addition of these aircraft would make Mexico the equal of any of its neighbors, except Cuba.

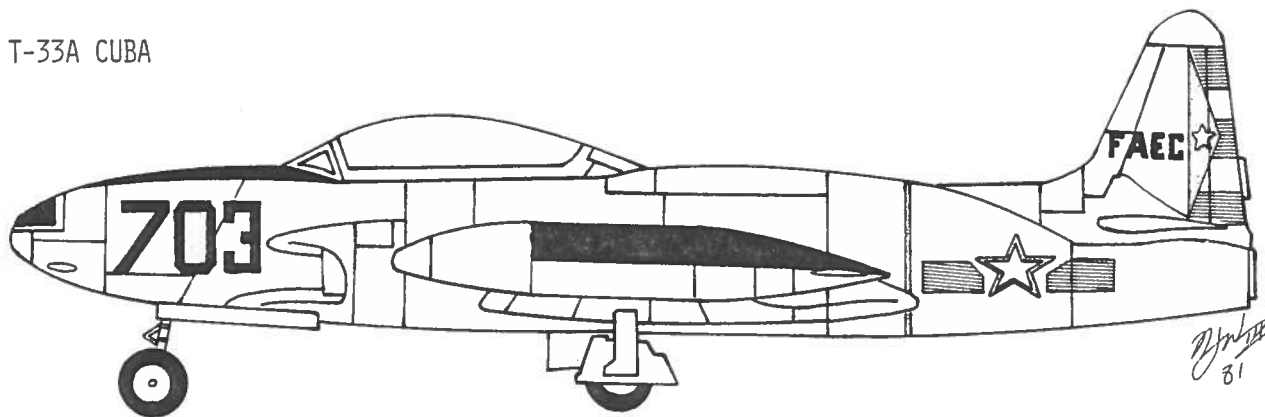
ARGENTINA: Argentina was offered T-33's at the time they received their F-86's, but did not take delivery.

VENEZUELA: Venezuela was also offered T-33's, but did not take delivery.

Several new color schemes have come to light as well. These include Cuba, Ecuador, and an additional scheme for Peru. I have also included a partial scheme for Nicaragua for which I need further information.

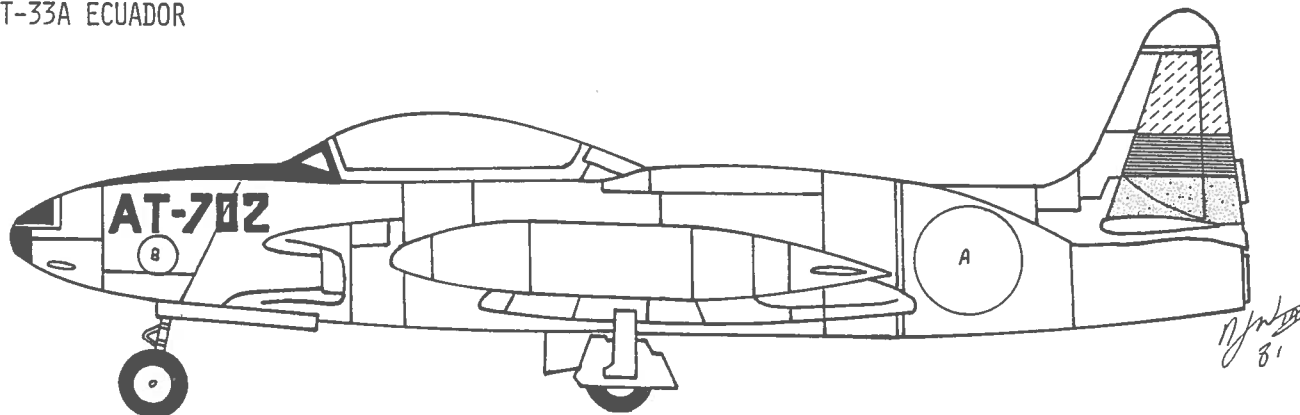
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T-33A CUBA



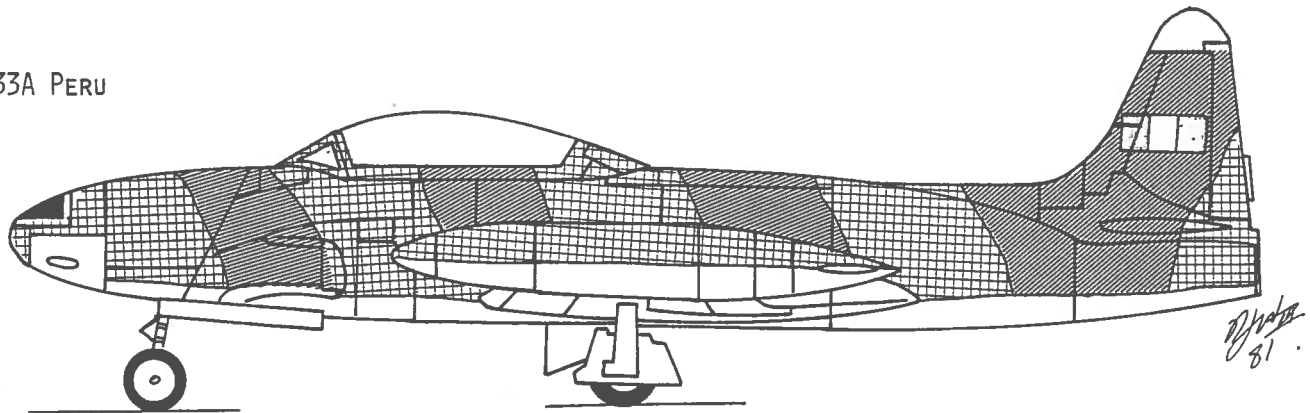
AIRCRAFT IS BARE METAL OVERALL, FIN TIP IS LT GREY, FRONT OF TIP TANK IS WHITE, GUNPORT AND BOTTOM HALF OF TIP TANK VERY DULL BARE METAL, INSIDE OF TIP TANKS FLAT BLACK.

T-33A ECUADOR



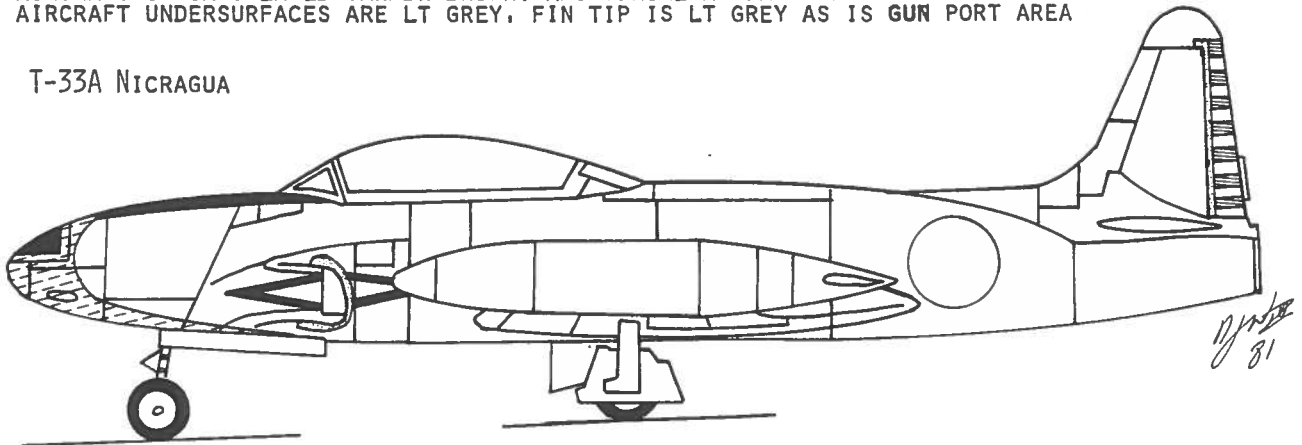
AIRCRAFT IS BARE METAL OVERALL, INSIDE OF TIP TANKS IS FLAT BLACK, TIP OF FIN IS LT GREY, WING MARKINGS ARE STANDARD ECUADOR ROUNDEL UPPER LEFT LOWER RIGHT, WITH FAE UPPER RIGHT/LOW LEFT.

T-33A PERU



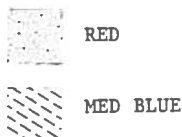
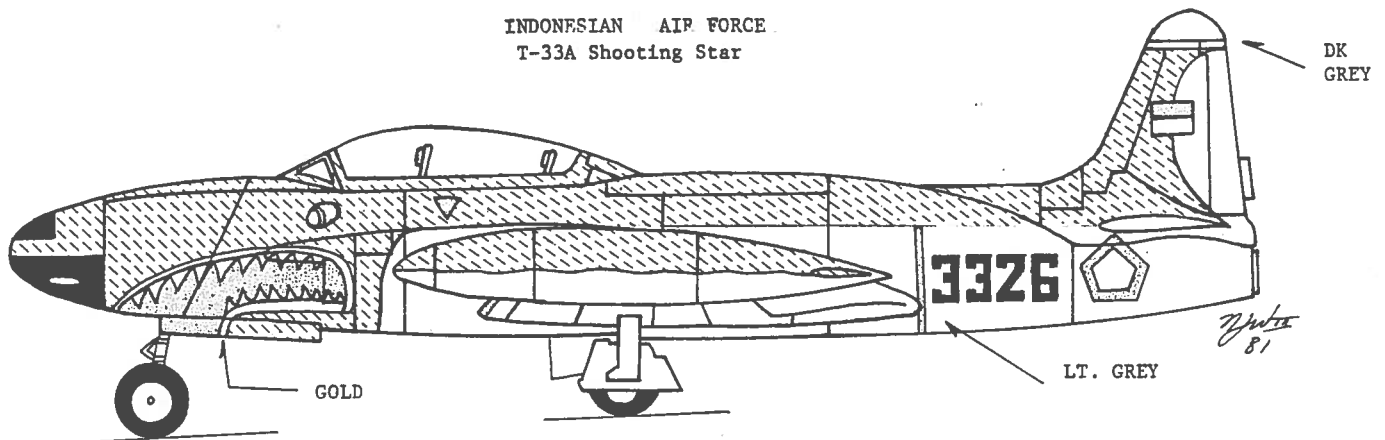
AIRCRAFT IS CAMOFLAGED TAN/DK BROWN, A/C SERIAL APPEARS UNDER FIN FLASH IN BLACK, NUMBER UNK
AIRCRAFT UNDERSURFACES ARE LT GREY, FIN TIP IS LT GREY AS IS GUN PORT AREA

T-33A NICRAGUA



AIRCRAFT IS DIRTY WHITE OVERALL, INSIDE OF TANKS FLAT BLACK, NOSE COLOR IS INTERNATIONAL ORANGE, SERIAL UNKNOWN POSSIBLY 303, THIS AIRCRAFT IS DRAWN FROM A VERBIAL DESCRIPTION
FURTHER INFORMATION OR PHOTOS WOULD BE GREATLY APPRECIATED.

INDONESIAN AIP FORCE T-33A Shooting Star



This a/c was observed at Iswahyudai Air Base, Java Indonseia; summer 1980. Aircraft is Gloss Med Blue over lt grey. The Sharkmouth is red/white trimmed in gold. The aircraft was armed with 2 X 12.7mm machine guns and has racks for bombs. The Indonesian's used this aircraft as a fighter in East Timor, flying close air support missions against insurgents along with OV-10, Sabre Mk32's and reportedly F-51's. These aircraft are to be replaced by British Hawk aircraft in 1981.

N.J. WATERS III (SAFCH #2)

MANCHURIAN AIR FORCE IN WW2

(The following notes and drawings add to those published in SAFO Vol.4 No.4(16), July 1980.)

With the Japanese invasion of Manchuria in 1931, the state was given nominal independence under the name Manchukuo. The existing air arm consisting of a few Breguet Br 14B-2, Potez 25, Handley Page O/400, Caudron C 59, and Schreck FBA was disbanded. However, with the growing strength of the central Chinese air force, the Japanese felt it advisable to form a Manchukuo Air Arm to supplement their forces stationed in the country. The equipment took the form of obsolete fighters and trainer aircraft, with only one type of bomber being included since this was to be a purely defensive force. The Japanese also wanted to be certain that this air arm could not be used against themselves. About this time, the Manshyu Kohku Kabushiki Kaisha (Manchurian Aviation Co.) was formed to undertake air transport, aerial survey, and aircraft manufacturing. Both the air arm and the aircraft company were controlled by the Japanese, the air transport section even carrying military style markings. This latter fact has led to a lot of confusion amongst aviation historians and I hope that the attached drawings will help put matters right.

Aircraft manufacture on the mainland of Asia was of importance to the Japanese because of their troublesome borders with Russia and pro-Russian Outer Mongolia. One of the machines produced was the Mansyu Hayabusa, a six seat transport aircraft for use with both the Manchurian Air Arm and the Transport Co. These machines were also used by Japanese airlines because of the shortage of similar Japanese equipment.

In 1942, the Ki-27 became the standard fighter aircraft of the Manchurian Air Arm, and the population was encouraged to purchase these machines for their own defence. These aircraft were inscribed with the name, or names, of the donors together with the inscription "Defence of the Homeland". In the summer of 1943, the JAAF reclaimed a large number of these machines which ultimately were to become suicide types. They also drafted large numbers of MAF pilots into the JAAF, and by 1944 the MAF no longer existed as a viable force even though it received a small number of Ki-43.

There are reports, however, of some action taking place between the MAF and the Russian forces during the latter's occupation of Manchuria during August 1945.

During the existence of the MAF under Japanese control, equipment used included: Kawasaki Type 88-11, Ki-32; Nakajima Type 91, Ki-27; Tachikawa Ki-9, Ki-54, and Ki-55;

During the existence of the MAF under Japanese control, equipment used included: Kawasaki Type 88-11, Kawasaki Ki-32, Nakajima Type 91, Nakajima Ki-27, Tachikawa Ki-9, Tachikawa Ki-54, Tachikawa Ki-55, Nakajima Ki-43, and

Mansyu Hayabusa.

During this same period, the airline operated the following: Mansyu Hayabusa, Fokker Super Universal, Junkes Ju 86Z-2, De Havilland DH 80a Puss Moth, Nakajima Ki-34, Clark GA 43, De Havilland Leopard Moth, Fokker F VII/3M, and Heinkel He 116.

Fig. A. Tachikawa Ki-9. Standard trainer of the MAF is finished in natural metal with the cowling in black. The symbol on the tail is also in black. National markings as shown in Fig. 10 of SAFO #16 are applied to the wings.

Fig. B. Tachikawa Ki-55. This is also finished in natural metal with black cowling and fuselage markings. The rudder is in red and standard markings (fig. 10) are applied.

Fig. C. Mansyu Hayabusa. A Manchurian designed and manufactured machine. The aircraft is in natural metal with the usual markings. The nose marking is in red with a thin white outline.

Fig. D. Clark GA 43. This machine was a single example bought by Japan Airlines and transferred to Manchuria. It is finished in natural metal, military style markings appear above and below the wings (as shown in Fig. 6) and on the tail.

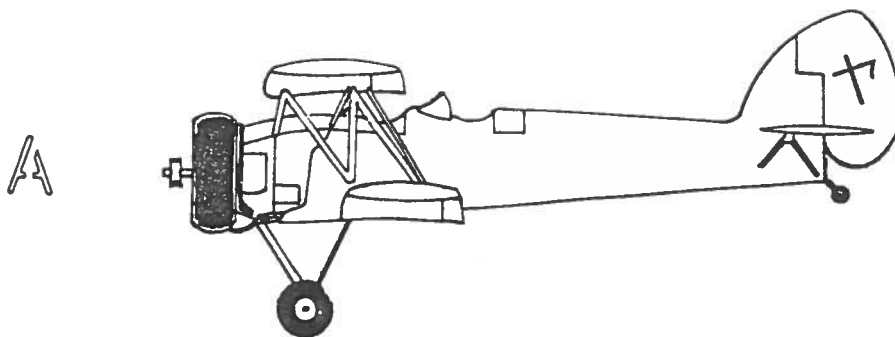
Fig. E. Nakajima Ki-27. Chosen as the standard fighter for the MAF and introduced on "Aviation Day" September 20, 1942. This machine is finished in pale blue green. The fuselage markings are in black, the first two symbols reading "Defence of the Homeland", the following denoting the donor.

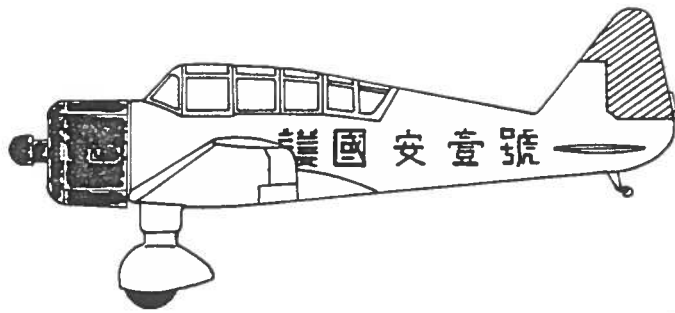
Fig. F. Nakajima Ki-43. One of the few machines of this type supplied before the end of the war. The aircraft is in natural metal with the usual national markings (Fig. 10). The anti-glare panel is in black as are the fuselage markings. The spinner is in brick red.

Fig. G. De Havilland DH 60. This machine is one of a batch supplied to the Manchurian Air Force just before the Japanese takeover. It is interesting to note that it carries the M code used by the Manchurian Airline after the takeover. It is finished in dark blue on all surfaces except the tail which is in white and carries the multi-pointed star on a blue and red rudder. The code is in white.

Note: The Kawasaki Ki-32 used by the Air Force were finished in pale blue green with no markings on the fuselage or rudder, and only the national insignia (Fig. 10) on the wings.

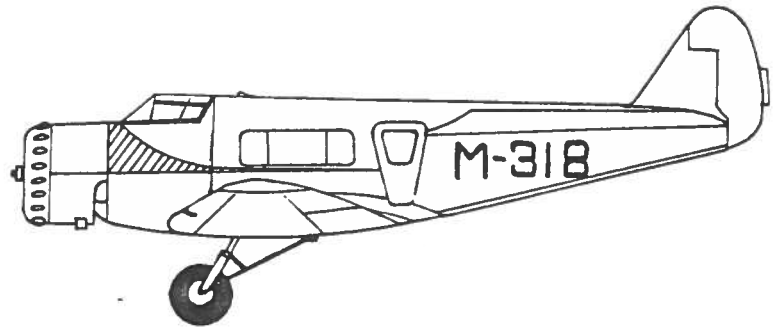
Bob Massey (SAFCH #364), 108 Worrall Ave., Arnold, Nottingham, ENGLAND.





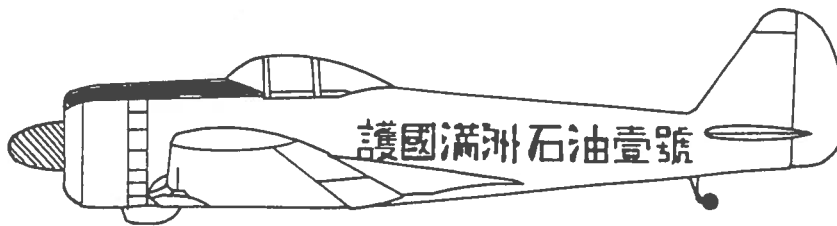
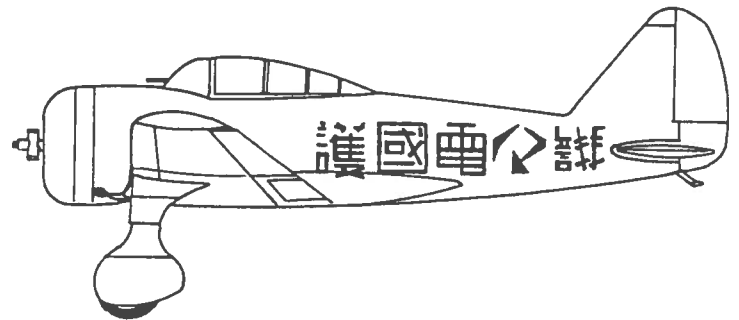
B

C



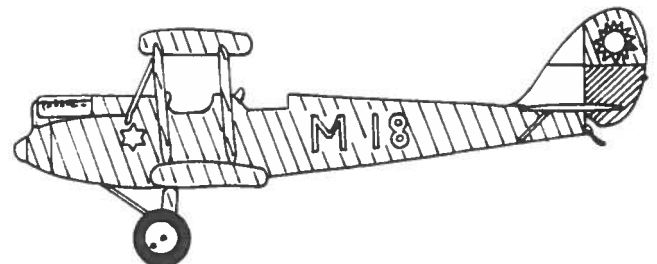
D

E



F

G



Aircraft of the Spanish Civil War

Part Five: FW 56, MB 200, & MB 210

The following drawings show three aircraft types in service with the Spanish Republican air arm during the Civil War. Very little is known about any of these, so further information would be most welcome.

Fig. A. This shows a Focke Wulf 56 which, with four others, was captured on a ship bound for the Nationalists. It was put into service as a fighter trainer and recaptured by the Franco forces who put it on exhibition with other Republican war planes. It is finished in fawn with dark green patches on all surfaces. It has red bands around the fuselage and wings and the Republican flag on the tail. It is not known if any numbers were marked on this machine.

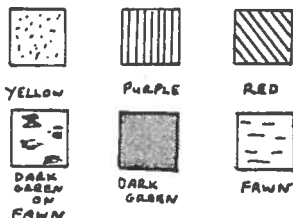
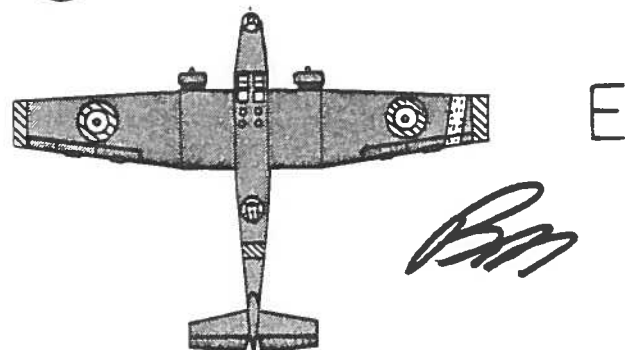
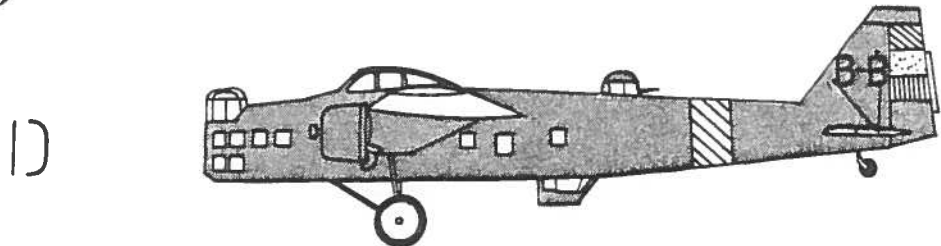
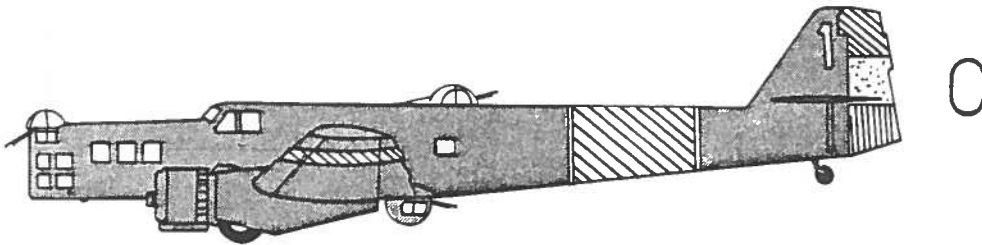
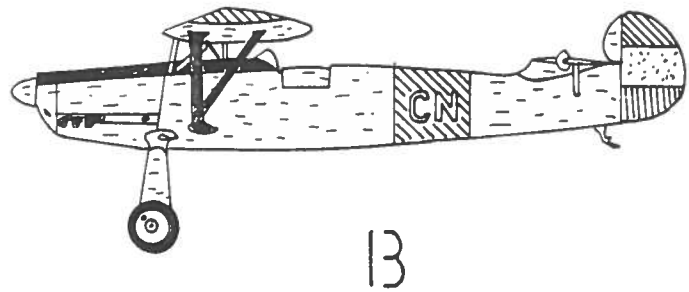
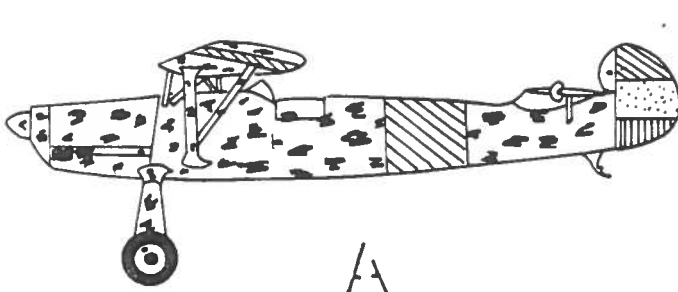
Fig. B. Also a FW 56 from the same captured ship. It is fawn over all except for the anti-glare panel in black and black wing struts. The wing tips are red as is the fuselage band. The letters are in white.

Fig. C. A Bloch MB 210, one of 15 supplied by the French; two in the Autumn of 1936, four in Winter 1936, one in Spring 1937, three in Autumn 1937, and 5 in Spring 1938. This aircraft is shown in the markings of Gr. 72 2 Esc. during June of 1938. It is finished in dark green overall with a white border to the fuselage band. The number is also in white.

Fig. D. Bloch MB 200. One of an unknown number of machines supplied to the F.A.R.E. The aircraft is finished in dark green with red wing tips and fuselage band. The letters are in black.

Fig. E. The plan view of Fig. D. The roundels are the pre-war colours of red, yellow, and purple centre. There is also a yellow band on one wing. This machine, from its markings, appears to be one of two thought to have been supplied in 1936.

Bob Massey (SAFCH #364), 108 Worrall Ave., Arnold, Nottingham, ENGLAND.



"Here is some additional information relating to Bill Brown's letter that appeared in SAFO #20 about modeling the aircraft of the Spanish Civil War:

Airspeed Envoy from Airfix Anson engines and Frog/Novo Oxford (1/72) Suggested by Bob Massey.

Amiot 143 from Heller (1/72).

Arado 95 from VacuSpecial (1/72).

Bucker 131 from Airmodel (1/72).

Bucker 133 from Airmodel (1/72) or Heller (1/72).

Caproni Ca 310 from Italaeri Ca 311 (1/72).

Cierva C-30 from VeeDay (1/72) or LDM (1/48).

De Havilland DH-9 from Airfix DH-4 (1/72).

De Havilland DH-9A from Airfix DH-4 with wings from Frog/Novo Wallace (1/72).

De Havilland DH-60 from Frog/Novo (1/72).

De Havilland DH-89 also from VeeDay (1/72) or Rareplane (1/72).

Dewoitine 500-510 series also from Rareplanes (1/72).

Fiat CR-42 (questional like I-153) from Revell (1/72).

Focke-Wulf FW-56 from Airmodel (1/72) or Heller (1/72).

Fokker F-VIIa from Frog/Novo (remove center 1 1/2 inches from wings, etc.) (1/72).

Hawker Fury also from Rareplanes (1/72).

Hawker Osprey from Airfix Deamon/Hart (1/72).

Heinkel 112B-0 also from VeeDay (1/72).

Junkers Ju 87A also from Airframe (1/72).

Lockheed Vega also from Rareplanes (1/72).

Martin 139 also from Rareplanes (1/72); one aircraft (Soviet?) painted in bogus Republican vertical (!) rudder stripes for propaganda purposed, but none used in Spain.

Messerschmitt Bf-109B/C/D from Heller not Matchbox.

Northrup Gamma; at least 3 supplied via Mexico.

Polikarpov I-15 from Heller I-153 with Monogram F4B-4 engine, cowling, landing gear struts, and wheels (1/72).

Polikarpov I-16 from Revell (1/72). By-Planes and Bald Eagle (1/48). Useful bulkhead and spar templates from Wilhelmshavener Modellbaubogen kit in paper (1/50). Instrument panel from MAP plans (1/72 & 1/48).

Potez 540 also converts to 542 and 543 from Heller (1/72)

PZL P-23 - possibly used in Spain, shipped on order of or via Mexico in 1937; if so, Heller (1/72).

Stinson Reliant - was used in Spain; to be released by Execuform in 1981 (1/72).

Vultee V-1A bomber version with dorsal position can be made from Execuform kit with section from plastic "egg" in which silly putty is sold (1/72).

"Microscale sheet 72-295 includes insignia for Bf-109D of Gottard Handrick, Condor Legion pilot and Olympic Gold Medalist at Berlin 1936. Number is 6-56, but can be rearranged for use on He 112B, etc.

"Additional references: 'The Spanish Seversky', Ackley, AAHS JOURNAL, Vol. 26, No. 1, Spring 1981. (Seversky amphibian in final days of the Civil War.) 'Breda Brood', Apostolo, WINGS, Vol. 11, No. 4, Aug. 1981. (Breda 65 and 65bis in Spain.)"

Tom Sarbauer (SAFCH #497), 25 Roble Rd., Berkeley, CA 94705.

-abstracts-abstracts-abstracts-abstracts-abstracts-

(Continued from page 45)

HB-XEL, HB-XDF, V-223). "MIG-15 Stern von Korea" 4 pages including 4 photos (63243, 63549, 63540, 63041). "Bell 214-B Biglifter" one page of 3 side-view drawings (HB-XKH, D-HOOK).

USA

DIRTY PLASTIC (IPMS PHOENIX, 509 W. Camino Dr., Phoenix, AZ 85021; 4 issues for \$6.00.)

Winter 80-81 (20 pages). One page drawing of Cambodian Douglas A-26.

SAFO #22 January 1982

Editor's note: Fritz Braun (SAFCH #220), Posener Strass 20, D-8000 Munchen 81, WEST GERMANY, wishes to contact members who can help resolve the following problems. This information is needed for a projected book about air forces insignia and lettering. Loaned material will be promptly returned. Also welcome is an exchange of photos and slides of military aircraft and insignia. However, due to extensive amount of time required by this reseach, inquiries not accompanied by data cannot be answered.

Problem 10: INDIA. The early insignia consisted of the Chakra wheel. Form A is green, white & saffron, and is known from photos of Spitfires and Tempest II. Form B is said to have been blue and silver (bare metal?) or white as in the Indian flag. Both forms had 24 spokes. Are any photos availbale of form B? What was the fin flash at that time? During what time were these insignia used?



Problem 11: PAKISTAN. According to Robertson's "A/C Camouflage Markings 1910-1967", the first insignia used by Pakistan is as shown and was in use during 1947-48 (placed on wings only). Any photos? Were any insignia used on the fuselage? Was it used on all four wing positions and with what orientation? Can anyone provide a good photo or official drawings of the insignia which appears on the Pakistan Navy Seakings? This insignia consists of a white circle with anchor & rope. Also needed is information about the insignia which appears on Pakistan's Breguet Atlantics (anchor over a green/white roundel).

Problem 12: CEYLON. A b&w photo appearing in Robertson's book shows the above lettering on the fuselage of a DH 114 Heron. The wing tips obscure part of the inscription. Can anyone provide a photo of the full text? Was it the same on both sides of the aircraft? In March 1972, Ceylon adopted the name Sri Lanka. The national insignia remained unchanged, except that the red was changed to brown. Can this be confirmed with a colour photo?

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ROYAL CEYLON AIR FORCE



Problem 13: NEPAL. This insignia was seen on a Royal Nepalese Army Skyvan (red star, white outline, black trident & drum). Can anyone provide a closeup photo or official drawing? I am also interested in photos of the Army's Alouette III and DHC-3.

Problem 14: BANGLA DESH. At the time this country gained its independence in 1971, Air Enthusiast published a short note stating that a roundel of green-gold-crimson was in use. A gold silhouette map of the country was superimposed on a slightly offset red disk. Due to the difficulties of depicting this map on both sides of a cloth flag, this insignia was dropped on 13 January 1972. However, it must have been used for a short time as a fin flash. The current roundel and flag is dark green and red. Can anyone provide photos of this early insignia? What were the proportions of the roundel, and in what positions was it applied?

hoist



THE WORLD OF JUNKERS

Part Six: The JUNKERS W.33, W.34, & K.43

The W.33 (Junkers L 5) and W.34 (radial engine) were transport aircraft built in large numbers from 1926. The K.43 bomber-reconnaissance aircraft were built/assembled in Sweden. The W.33 was used by the military services of Bolivia, China, Columbia, Ethiopia, Germany, Iran, Soviet Union, and Sweden. The W.34 served with the military services of Argentina, Australia, Bolivia, Chile, China, Columbia, Croatia, Ecuador, Finland, Germany, Czechoslovakia, Portugal, Rumania, Slovakia, Soviet Union, Spain, Sweden, and Venezuela. And, the K.43 was used by the military services of Argentina, Bolivia, Columbia, Finland, and Portugal.

Fig. 1. K.43 (W.34) ambulance 103 of the Argentine Air Force 1935.

Fig. 2. K.43 105 of Argentine Air Force after modification ca. 1936.

Fig. 3. W.34hi 1-E-65 of Argentine Navy ca. 1935. Later 1-E-305. Also 3-Gt-4.

Fig. 4. K.43f BOLIVAR of Bolivian Air Force ca. 1932. Originally delivered to Venezuela, probably for demon-

stration. K.43 prototype, converted by AB Flygindustri.

Fig. 5. K.43h of Bolivian Air Force ca. 1934-35. (Details from Daniel Hagedorn.)

Fig. 6. W.33 CUNDINAMARCA of the Colombian Seadta company 1931.

Fig. 7. K.43do 403 of the Columbia Air Force ca. 1933.

Fig. 8. W.34h 407 of the Columbia Air Force as preserved.

Fig. 9. K.43f JU-124 of the Finnish Air Force in the 1930's.

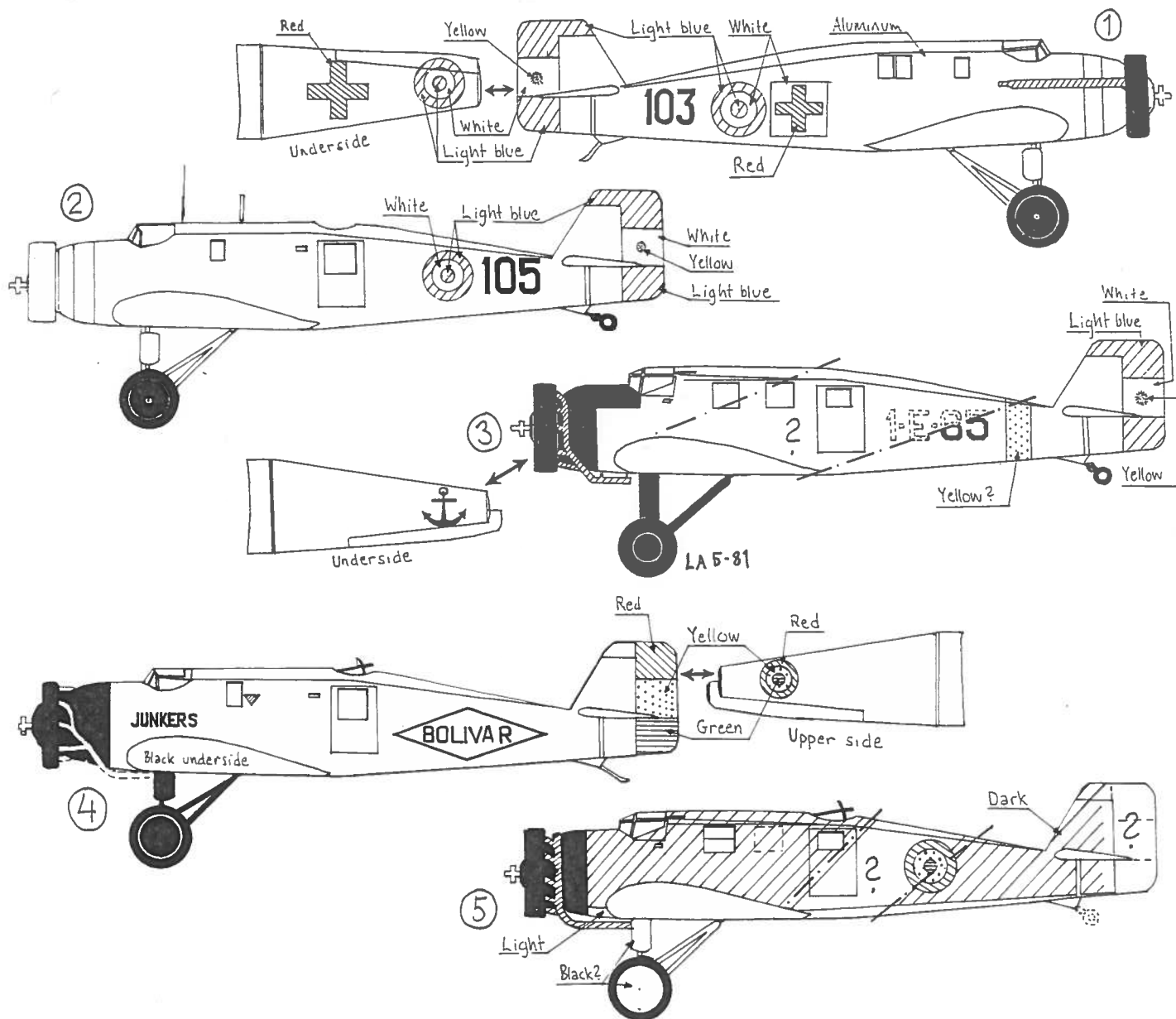
Fig. 10. W.34h JU-133 of the Finnish Air Force 1950.

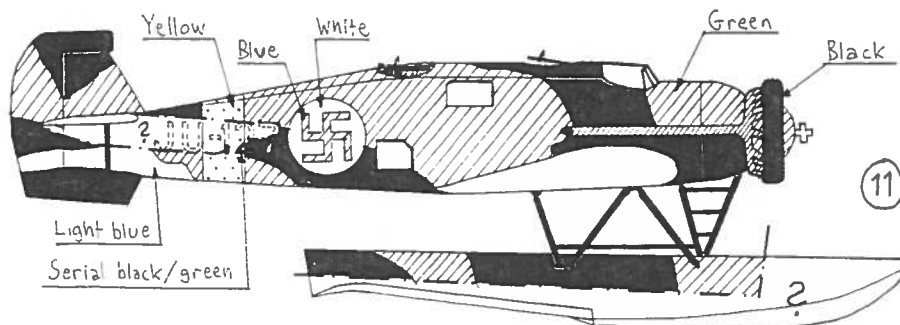
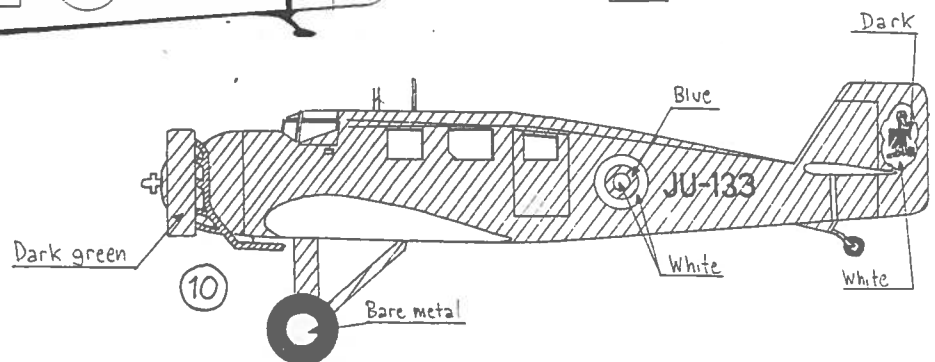
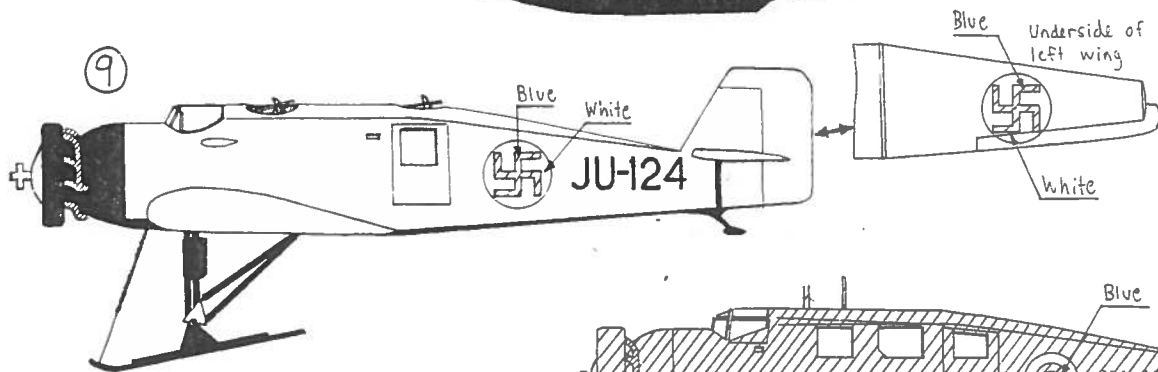
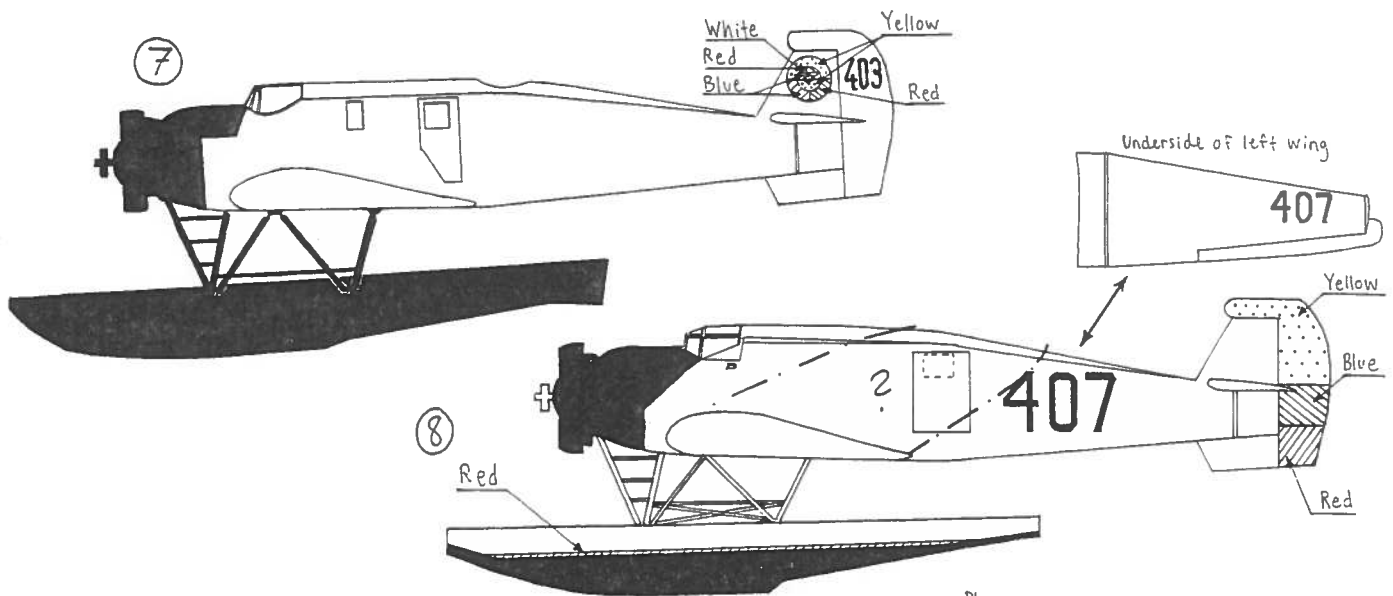
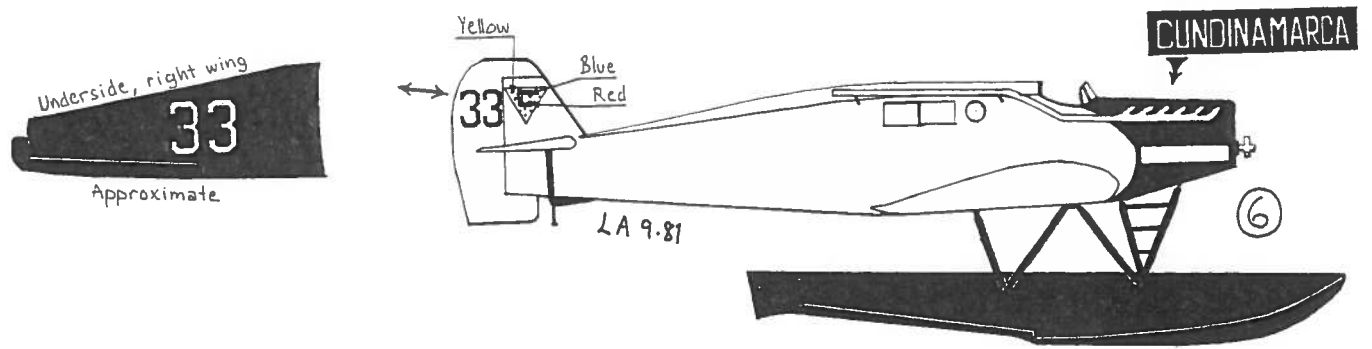
Fig. 11. K.43f JU-127 of the Finnish Air Force in Continuation War camouflage.

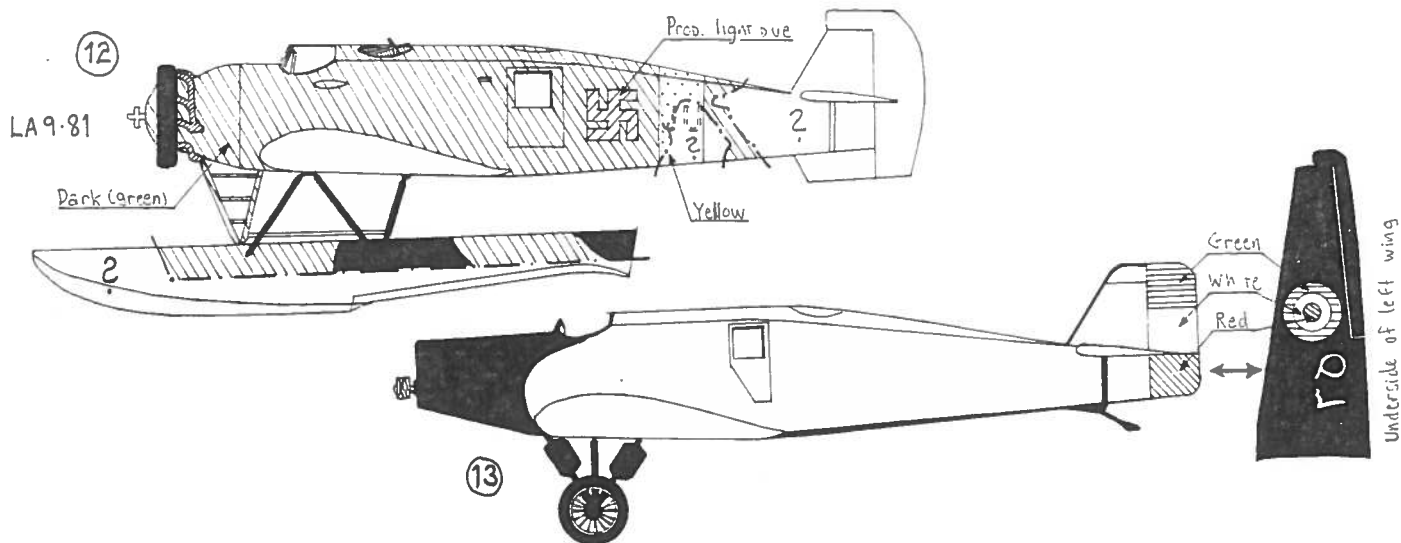
Fig. 12. K.43f in special paint scheme for the Finnish Air Force 1942.

Fig. 13. W.33 J 7 of the Persian Air Force 1930.

Lennart Andersson (SAFCH #68), Liljeg 9A, S-752 24 Uppsala, SWEDEN.







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BELGIUM AIR FORCE DECALS: #1 Post WW2 Roundels, #2 White Serials, #3 Black Serials. (100 Belgian francs each including surface postage.)

IPMS BELGIUM and Jack Peeters Modelbouw have cooperated to produce three sheets of decals that will allow the modeler to finish a variety of models (either in 1/48 or 1/72 scale) in the markings of post WW2 Belgium Air Force a/c. Aircraft possible with these sheets are the F/RF-84F, T-33A, F/TF-104G, Alpha Jet, and Mirage 5BA/BD/BR, either bare metal or camouflage as appropriate.

The roundel sheet measures 19 cm by 14.5 cm and includes: plain roundels (10 8 mm, 8 10 mm, 8 12 mm, 8 14 mm, 8 17 mm, & 6 20 mm); blue-outlined roundels (6 8 mm, 4 10 mm, 4 12 mm, 4 15 mm, & 4 19 mm); fin flash (8 cm 4.5 mm, 4 cm 6 mm, 6 cm 6.25 mm, 12 cm 7.5 mm, 6 cm 11.25 mm - with about equal amounts with wide or narrow yellow center stripes).

The two sheets of letters, each the same size as the roundel sheet, includes letters (FU, FR, FT, FX, FC, AT, BA, BD, BR) and numbers in both angular and rounded styles. Serial are included for use on both 1/72 and 1/48 scale a/c. I made no attempt to count the letter of each type and size, but each sheet contains approximately 12 different sizes with at least 4 individual serials in each size and style.

Printed in Great Britain, these sheets are of the highest quality; printing is sharp, the colors are accurate and dense, and register is perfect. I don't know if an instruction sheet is available for the roundels, but that for the serials is in English and identifies each decal. A full page of drawings shows the positions of each serial on each a/c type. Also included is a list of back issues of KIT containing major articles on the a/c covered.

The price of each sheet, equivalent to \$US 2.60 (at the exchange rate of 12 Jan. 1982), is extremely reasonable, and these sheets are highly recommended to all small air force modelers. If we support IPMS BELGIUM in these efforts, perhaps they will be encouraged to extend this series of decals to include early post-war types and even per-war types. These decals, and back issues of KIT, can be obtained from Jack Peeters Modelbouw, Brederodestraat 61, B-2000 Antwerp, BELGIUM. (Review copies graciously provided by IPMS BELGIUM.)

GERMAN AND AUSTRIAN MARKINGS AND PERSONAL INSIGNIA 1914-1918. 1/72-scale decals. (18.95 DM).

Our man in Nurnberg, Bill White (SAFCH #256), sent a review copy of a set of decals produced by a local modeling club. This set consists of 2 sheets; one measures 25.5 cm by 17 cm and includes national insignia, numbers, serials, and personal markings; the second measures 24 cm

by 22 cm and features sea-type-logenge and blue stripes. The instruction sheet consists of 3 pages of side-view drawings (25 a/c) and 2 pages of text (in English) describing each a/c.

Decals are provided for the following a/c: German - Halberstadt D.II, Albatros D.III (2), Halberstadt CL.II (2), Fokker D.VII (2), Albatros D.XI, Siemens-Schuckert D.III, Hansa-Brandenburg W.29 & W.20, and Junkers D.I (2). Austrian - Albatros D.III(Oef) (3) and Phoenix D.II.

The first sheet, printed in black and white, includes insufficient national insignia to do all the a/c described, but this is no problem since these are readily available elsewhere. Personal insignia are provided for all a/c described. Also provided are decals of the Albatros trademark which appears on the rudder of all machines built at the Albatros works in Schneidemuhl, and decals of the Axial trademark which was applied to the blades of all Axial-made propellers.

The second sheet is almost entirely covered with a lozenge pattern in pink, purple, and white. The instructions describe this as a sea-type-lozenge to be applied to the H-B seaplanes. The colors are somewhat thin, so that these decals should be applied over grey. (The information for the seaplanes and for the colors of the lozenge were provided by the German Society of World War One Aero Historians.) The blue stripes are not meant to be applied to the sea lozenge, but over the wing ribs of all a/c finished in land-type lozenge. Land-type lozenge is not provided, but must be obtained elsewhere.

In summary a good set of decals for the much neglected modeler of WWI a/c, but at \$8.30 (based on the exchange rate as of 12 Jan. 1982) they are somewhat expensive unless you plan to build either a lot of the land planes or the sea planes. No business address is given, so I suggest that you send your order to Bill White, 50 Bulmannstr., 8500 Nurnberg 40, WEST GERMANY, and he will see to it that the decals get sent to you.

In a review of Brendon Deere's MILITARY WINGS, Vol. 2, which appeared in SAFO #20, it was mentioned that the chapter on the Ventura was missing from the review copy. A complete copy has now been received from the author, and I am glad to report that the Ventura has not been left out. Missing from the first review copy only were 5 photos of the Tiger Moth and the entire chapter on the Ventura. This latter occupies 13 pages and includes 23 photos of RNZAF Venturas. As in all the earlier chapters, the photos are outstanding. This book is available from Graham Turner (SAFCH #424), 7 Eldorado Rd., Cheltenham, Glos. ENGLAND, for £ 3.95 including postage to SAFCH members.

ANTIPODEAN NORSEMEN

1. A-71-7, No. 1 Aircraft Performance Unit, Laverton, 1943. Upper surfaces and wing struts - US olive drab. Under surfaces - US neutral grey. Propeller blades - black with yellow tips. Serial numbers - light grey. Roundels and fin flash - insignia blue and white.

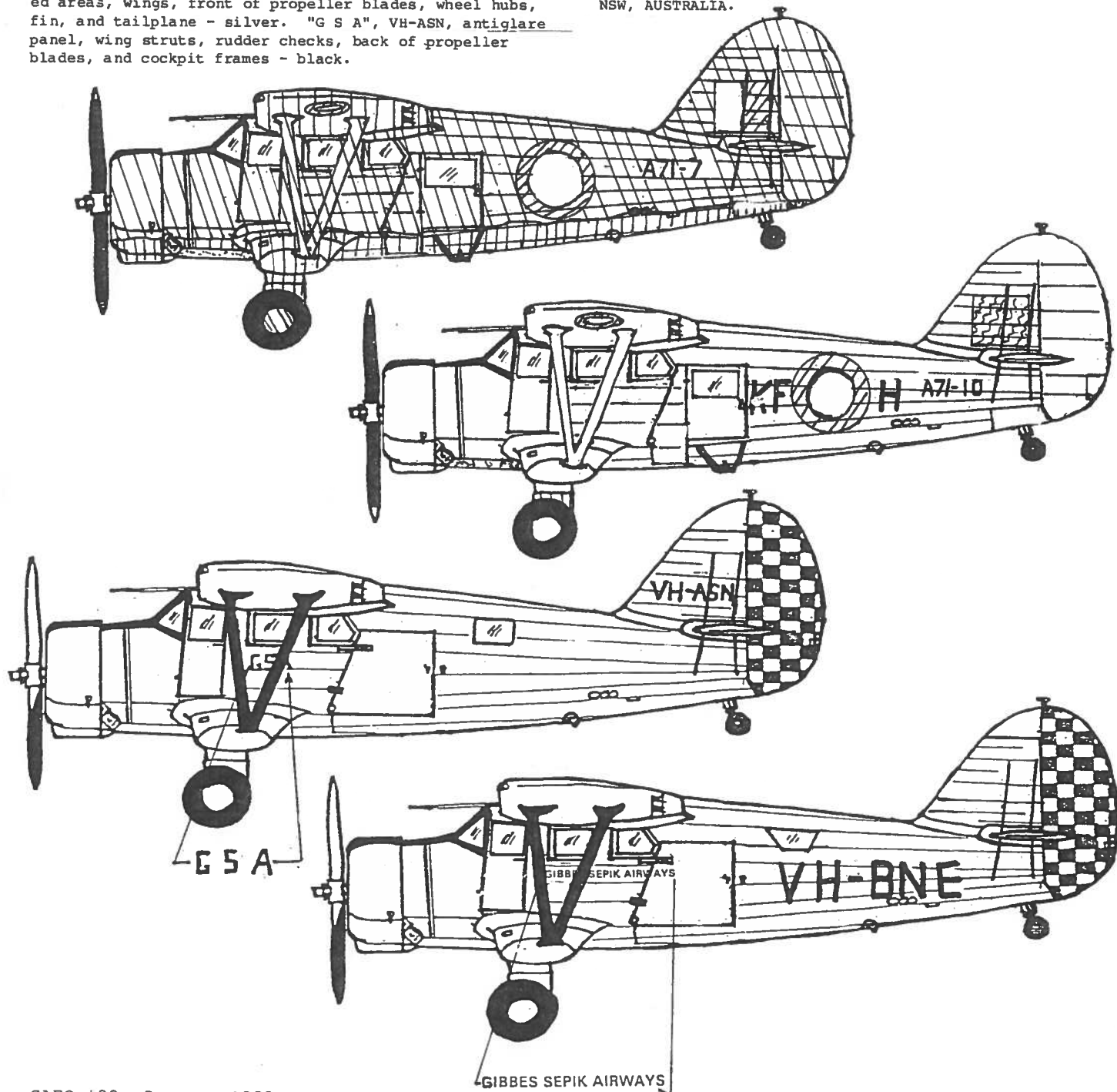
2. A71-10, KF-H, No. 5 Communication Unit, 1945. Overall - faded foliage green (fin flash recently over-painted). Lower part of undercarriage struts - neutral grey. Propeller blades - black with yellow tips. Wheel hubs - white. Codes and serial numbers - white. Roundels - insignia blue and white.

3. VHJ-ASN, Gibbes Sepik Airways, PNG, 1950's. (Gibbes Sepik Airways was formed in the late 1940's by Wing Commander Bobby Gibbes, DSO, DFC, RAAF(Rtd) in the Sepik River region of Papua New Guinea, for aerial freight work and charters.) Metal panels, cowling, undercarriage, doors, front fuselage - natural metal. All fabric covered areas, wings, front of propeller blades, wheel hubs, fin, and tailplane - silver. "G S A", VH-ASN, antiglare panel, wing struts, rudder checks, back of propeller blades, and cockpit frames - black.

4. VH-BHE, as above. (A third Norseman owned by GSA was registered as VH-GSA. Its colour scheme and markings are the same as above except that it didn't have the extra fuselage windows aft of the cargo loading doors. All three aircraft had modified fuselage doors as shown in the drawings. These doors were often removed for air dropping of supplies to police patrols and mining camps in the mountains and valleys of the region. Other aircraft used by GSA were an Auster J.5 and three Ju-52s powered with Pratt and Whitney radials.)

References: AIRCRAFT OF THE RAAF 1921-1978, Pentland and Malone, Kookaburra, 1978. THE RAAF & RNZAF IN THE PACIFIC, Aero Pictorial #3, Aero Publishers, 1970. SEPIK PILOT, Sinclair, Lansdowne, 1971.

Mike Mirkovic (SAFCH #465), 11/32 Curlew St., Bondi, NSW, AUSTRALIA.



(BELGIAN SCOUTS IN W.W.I)



probably sqn.n'5 1918
pilot: e.mantel
serial: Sc35

all wing cockades
omitted for clarity.



n'1 sqn. 1918

ACCESSIT

H.D. 212

(possibly painted white later)

undersurfaces: clear dope (on Camel,Pup,Ni11) alu dope (on HDI , Ni17)



n'1 sqn. 1917

pilot: c. verbessem
serial: N5015



n°1 sqn. 1916

note: THIS PLANE WAS LATER
FLOWN BY E. THIEFFRY.

**'SOIT' OVERPAINTED BUT
SHOWING THROUGH
WHITE WHEEL COVERS
WITH RED BAND ON IN-
NER & OUTER SIDE**

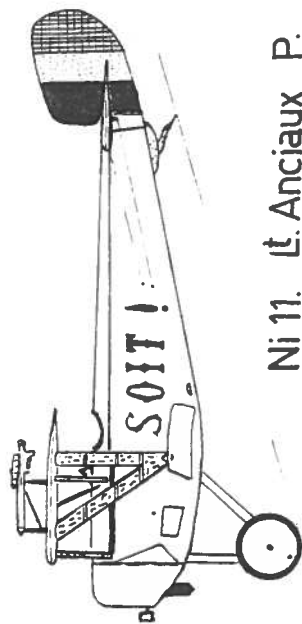


squadron unknown 1917
serial: Sb 4

**KHAKI GREEN (PC10 ON BRITISH
BUILT AIRCRAFT ?)**

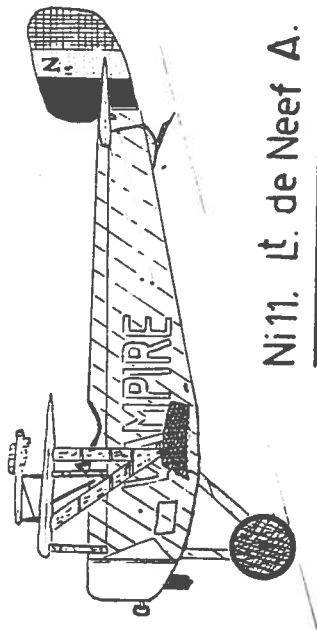
ALU. DOPED

DARK VARNISHED WOOD



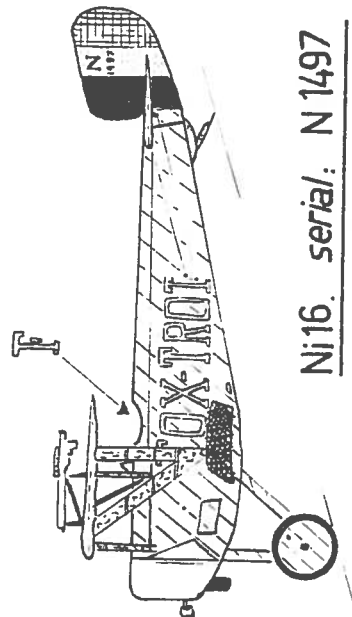
Ni 11. Lt. Anciaux P.
serial unknown.
black motif.

note: unpainted metal alloy cowlings & fairings on all aircraft.



Ni 11. Lt. de Neef A.
serial: N 14??

↑ white motif ↓

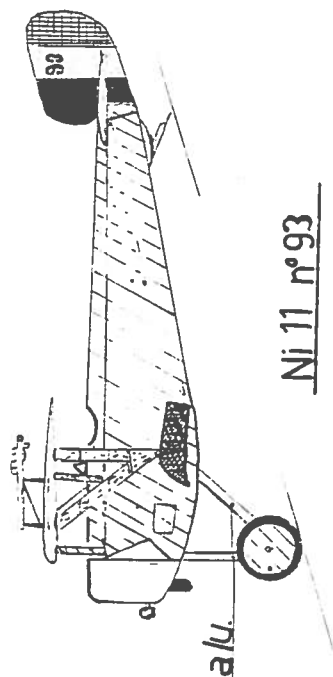


Ni 16. serial: N 1497

NIEUPOORT 11 & 16
n°1 squadron
aeronautique militaire belge 1916/17

SOIT ! 93

(not to scale) (stencil type serial on all aircraft)



Ni 11 n°93

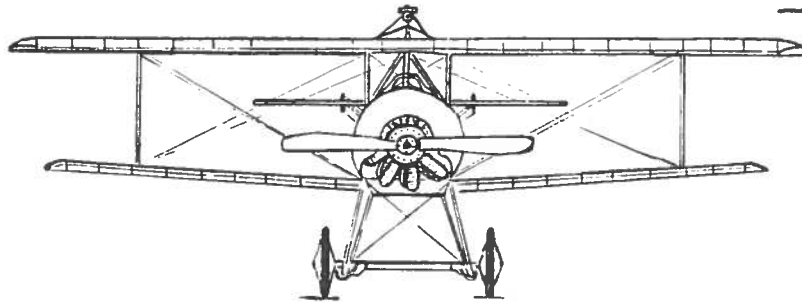
varnished wood: propeller, tail skid, interpl. struts.

alu.dope	black	yellow	
clear doped linen		khaki green	red

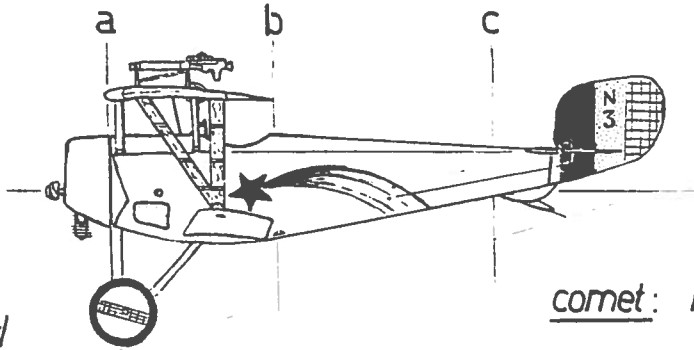
scale 1/72 ipms /bs verhegghen r.

NIEUPORT 11

n° 5 sqn.

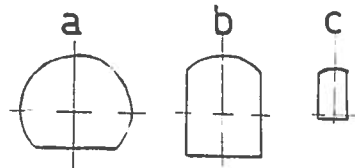


pilot : Thieffry E.



wheel hub : white
red band
(outside only)

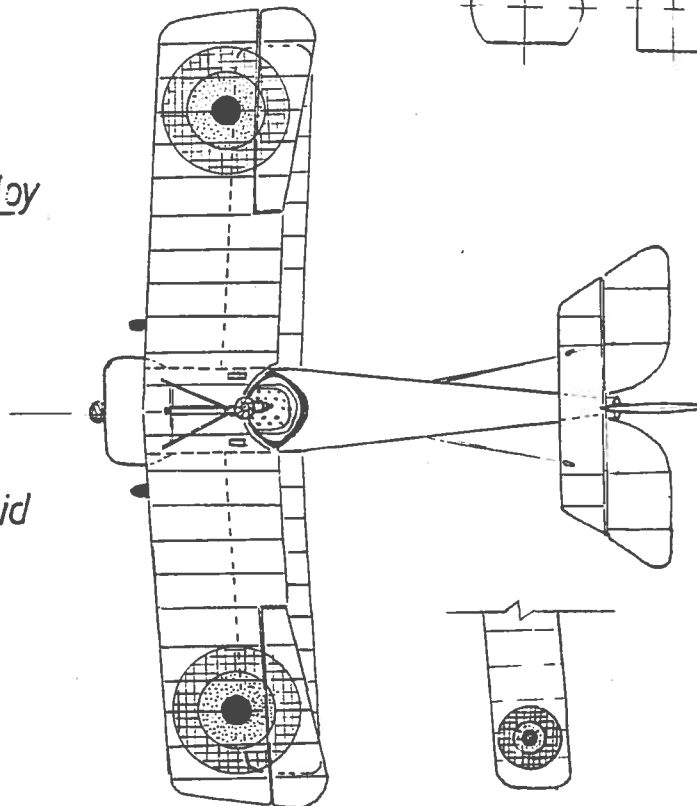
comet : red tail & star



unpainted metal alloy
cowling & fairing

alu. cabane struts

varnished wood
propeller . tail skid
interpl. struts.



red



yellow



black



alu.dope



ipms/bs scale 1/72

verhegghen r.

R. Verhegghen (SAFCH #305), Av. Thiriar 16 Bte 4, B-1020 Brussels, BELGIUM
(Reprinted with the kind permission of IPMS BELGIUM.)

GODLO I BARWA W LOTNICTWIE POLSKIM 1918-1939, by Tomasz Kowalski. 156 pages, 14 cm by 26 cm, soft bound. \$6.50.

Small-Air-Forces-Clearing-House member Tomek Kowalski has produced what is beyond a doubt the best book on the markings and color schemes of any small air force. Only the fact that I am prejudiced by being a Polish Air Force freak prevents me from claiming that this may be the best book on the markings and colors of any air force.

While written in Polish, this book is so profusely illustrated with drawings, photos, and tables, that no understanding of the Polish language is necessary to determine enough exotic information to keep even the most prolific and discriminating modeler busy for a long time. The inability to read Polish is felt only when one realizes that there is ever more fascinating information in the text.

The book is divided into six chapters:

(1) Polish Air Force Insignia 1917-1939 (27 pages including 13 photos, 11 pages of drawings, 3 tables). The various national insignia used by the PAF are described and illustrated. Included are insignia used by the Polish units fighting with the Russians in 1917-1918, local insignia as well as unusual and incorrect interpretations of the official insignia, and the various forms of the officially proclaimed insignia. The tables and drawings delineate the size and location of the national insignia (including the unique asymmetrically placed wing insignia) by a/c types.

(2) Colors of A/C 1918-1921 (33 pages including 15 photos, 14 pages of drawings, 7 tables). This chapter covers the enormous variety of color schemes during the period when the Poles used a/c obtained from every possible source in their fight to maintain their newly won freedom. Squadron and personal insignia are also illustrated.

(3) Colors of A/C 1921-1939 (35 pages including 12 photos, 20 pages of drawings, 4 tables). This chapter follows the development of color schemes as the PAF evolved from French- to Polish-designed a/c. The tables in this chapter list "numer ewidencyjny" for each a/c type (e.g., 42 for the Potez XXV) and the identification codes for each air unit (e.g., N for "1 Pluk Lotniczy w Warszawie").

(4) Squadron Insignia 1921-1939 (20 pages including 19 photos, 7 pages of drawings, 2 tables). The dimensions and colors are given for both the early geometrical insignia as well as for the later more colorful insignia. The tables list the a/c used by each squadron and the insignia these a/c carried.

(5) Special Markings 1921-1939 (12 pages including 12 photos, 2 pages of drawings).

(6) Colors and Markings of Prototype and Demonstration A/C (8 pages including 3 photos, 3 pages of drawings).

In all, over 150 individual a/c of 43 different types are illustrated with at least a side-view drawing. Nineteen of these drawings are in color, and all the rest are coded to a color chart. Because of the limitations of the printing process, the colors are only approximate, but they do help the reader hurdle the language barrier.

After all this praise, I should point out that the book does have its technical faults: The quality of the photos, while better than usual from Eastern Europe, are not up to Western standards. It is sometimes difficult to match the shading on the drawings to the color chart. And, the binding is not going to hold up under the constant use to which you are going to put this book.

(Editor's note: Tomek asked me to collect the money for his book and to send him a list of all who paid. He would then mail the books directly from Poland to each individual purchaser. I see no reasons to change these plans now. Some day communications will be restored and the books you order now will be sent to you. In the meantime, I have received six copies which I will send to persons picked at random from the list of members who have paid their \$6.50. This drawing will be made either as soon as communications with Poland have been restored, or after everyone has had a fair chance to send in their money; whichever comes first. Please do not hesitate to

order this book as soon as possible. All money collected will be used to send to Tomek those things that he requests.)

CANADAIR CT-114 TUTOR. 1/72-scale vacuform kit. (CAN \$4.50 or US \$4.00)

The second vacuform kit from CANVAC MODELS is a little gem, both in choice of subject and in execution of the kit. This little, T-tailed jet trainer is probably most familiar to North American readers in the attractive red and white colors of the CAF Snowbirds. It has additional small air force interest because of its service with the Royal Malaysian Air Force.

Because of its relatively straightforward configuration, the Tutor is a much simpler model than CANVAC's first release, the gull-winged, biplane Gregor. This kit consists of 33 parts molded on two 18.5 cm by 11 cm sheets of white plastic, three clear parts, and 7 injection molded parts. The plastic is a little too thin for my liking (I have been spoiled by those excellent kits from Czechoslovakia). Because male molds have been used, surface detailing is lacking (except for the outlines of the control surfaces), but it should not be missed since the Tutor is a rather clean a/c. The large canopy is sharply molded and very clear.

Extra parts are provided to allow construction of any of three versions: a standard trainer, a flight demonstration a/c, or an a/c of the RMAF. The injection molded parts deserve special mentions, not only because they provide wheels and landing gear struts thereby making a foray to the proverbial spare parts box unnecessary, but also because they are produced by SAFCH member Greg Reynolds.

The instruction sheets, consisting of four pages, is better than from any commercial firm. The first page includes a short but informative history of the Tutor, and an assembly diagram which includes templates for all necessary bulkheads. The remaining 3 pages consist of beautiful drawings of the Tutor in service: (1) standard RCAF (1964), overall silver with red panels; (2) the Red Knights (1966), overall gloss red with white trim; (3) Golden Centennaires (1967), metallic gold upper surfaces and very dark gloss blue under surfaces; (4) Snowbirds (1979), gloss red with white snowbird motif; (5) standard CAF (1981), overall silver with red panels; (6) RMAF Tebuan, olive upper surfaces with pale grey under surfaces.

Decals for the Tutor are available on "Sabre Decals" 8-72 RCAF/CAF Trainers and 9-72 Aerobatic A/C. These decals may be obtained from Darbar Depot, PO Box , Sardinia, NY . The kit is available from CANVAC MODELS, 2250 Cape Horn Ave., Coquitlam B.C., V3K 1J6 CANADA.

(Review copy courtesy Greg Reynolds.)

ALPHA PRODUCTIONS, 1/72-scale vacuform kits.

From Belgium comes a series of vacuform kits of a/c guaranteed to lift the hearts of all small-air-force modelers, especially those interested in the neglected time period between the two World Wars. Kits currently available from Alpha include: Renard R-31, Lublin R-XIII, Romeo R0-37/37bis, Fokker C.Vd/e, Fokker C.X, Potez 25, Dornier Do.22, Høver MF-11, and Avro Canada CF-100. Plans for the future include a trio of Fokkers: T.V, T.VIIW, & S.14.

I know you want the price and address now so you can get your order out as soon as possible, but first the obligatory review: Molded in thick plastic, these kits should go together as easy as an injection molded kit. Many include alternative parts to produce different versions, such as the Ro-37, Fokker C.V, and C.X which can be built in either the radial- or inline-engine versions. While the kits appear to be accurate and well engineered, they include only the main components (fuselage, wings, tail surfaces, floats, wheels spats, etc.) and small parts such as radial engines, propellers, machine guns, etc. will have to be either scratch built or taken from

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RAAF OTTER

The DHC-3 Otter, which first flew on 12 December 1951, some 30 years ago, sold well, principally as a military aircraft. Of the 466 Otters built, 359 were sold to various military users, the remaining 107 going onto the civil market. By far the largest customer for the Otter was the United States Army, who accepted 190 aircraft, and many of these were passed on to client states of the US when the Army no longer needed the type. In all, 18 air arms operated the Otter, in all parts of the globe.

One of the more interesting Otter operators was the Royal Australian Air Force, which received two aircraft in February 1961, serialised A100-390 and A100-392. They were acquired for the specific purpose of supporting the Weapons Research Establishment at Woomera, and were flown by personnel of No. 1 Air Trails Unit, who operated what was known as the Range Taxi Service (RATS). The Otters were used to place and retrieve observers at down-range instrumentation sites for the various test firings that were carried out at Woomera, to track down expended missiles and target aircraft, and on general purpose duties. They were modified to take 300 lb drop loads on racks under each wing and had attachments on the fuselage and undercarriage for carrying long loads of up to 1600 lb. They were operated by the RATS until No. 1 ATU disbanded on 30 September 1967 and were then transferred to the Department of Supply as VH-UPL and -UPM respectively.

Despite their transfer to the civil register, they continued to support the Woomera Range and were operated on behalf of the Weapons Research Establishment by Shorts Air Services. Their operation was now termed the Range Ferry and Recovery Service. The functions of the Department of Supply were taken over by the Department of Defense, to whose ownership the two Otters were transferred, but the Range operations continued without incident until late 1978, when there was no further need for the services with the rundown of the Range. The Otters were declared surplus and put into storage at Woomera. They were sold in June 1980 together with three Alouette III helicopters which has also been in use at Woomera.

The two Otters were purchased by Bannock Aerospace Ltd of Toronto and were flown to Hawkers Pacific's facility at Bankstown to be crated for shipping. Twenty years after they had left, both aircraft arrived back in their

native Canada, at Vancouver, BC, on 15 November 1980, and are now both in service in the Canadian bush.

This brief account is by way of introduction to a plea for information on the Otter for a book to be published next year. Two year's research has produced most of the required information, but gaps still persist. The above relatively complete account of Australian military Otter operations is possible because of the excellent cooperation from relevant authorities, but unfortunately there are many parts of the world where such co-operation is not forthcoming, and the researcher must look to fellow enthusiasts for help.

There follows a list of countries whose air arms operated the DHC-3 and in respect of which my information is incomplete, specifying what is outstanding: Burma (what became of the nine aircraft which the Union of Burma Air Force operated?); Ethiopia (serials, constructors numbers, and fates of the six aircraft operated by the Ethiopian Army); Ghana (what became of Otters serialised G300, G301, G302, and G308?); India (the fates of their Otters); Indonesia (serials, constructors numbers, and fates of the seven aircraft); Nicaragua and Panama (similar information). Furthermore, if anyone has information as to the precise purpose for which these, and other, air arms used the Otter, this would be of interest for the book.

For example, it is well known that the Fureza Aerea Panamena flew the Otter, and photographs are contained in many of the well-known reference books. However, opinion seems to be divided as to whether they operated four or six aircraft, and I have not been able to ascertain the constructor's numbers of these Panamanian Otters. FAP-302 is often quoted as c/n 113, but my researches have shown that this is not correct.

If, therefore, any fellow enthusiasts can add to my knowledge of the Otter aircraft, I certainly would appreciate hearing from him (or her), as I would like the proposed book on the Otter to be as accurate and complete as possible.

Karl E. Hayes (SAFCH #569), Crakaig, Killiney Hill Road, Killiney, County Dublin, IRELAND.

ISRAELI SKYHAWKS

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19. Extra antenna added to updated A-4E. Same style as illustrated here on the avionics pack. It is on the same angle as the pitot tube in front of it. On some models, this pitot tube is removed.
20. Avionics pack.
21. Detail of armament panel on nose-wheel door.
22. Detail of rescue arrow on aircraft which have had their stencils repainted in Hebrew. Yellow arrow with black outline and letters.
23. Detail of the extended exhaust shown here in 1/48 scale. To convert an existing kit, the fairing above the exhaust should be cut back and the striped area removed. The exhaust pipe is extended and a standard exhaust cone is added. A fairing on top of the exhaust is then added. The whole area is then built-up. See three-dimensional drawing for detail of this faired area.

Photograph: An A-4H, numbered 704, seen at an airbase somewhere in Israel during 1973. This is a standard A-4H without the avionics pack, but modified location of the wing guns. Note the location of the national insignia and the armament panel on the nose-wheel door.

Z. Margulies (SAFCH #264), PO Box 346, Toorak, Vic 3142, AUSTRALIA.

ALPHA PRODUCTIONS

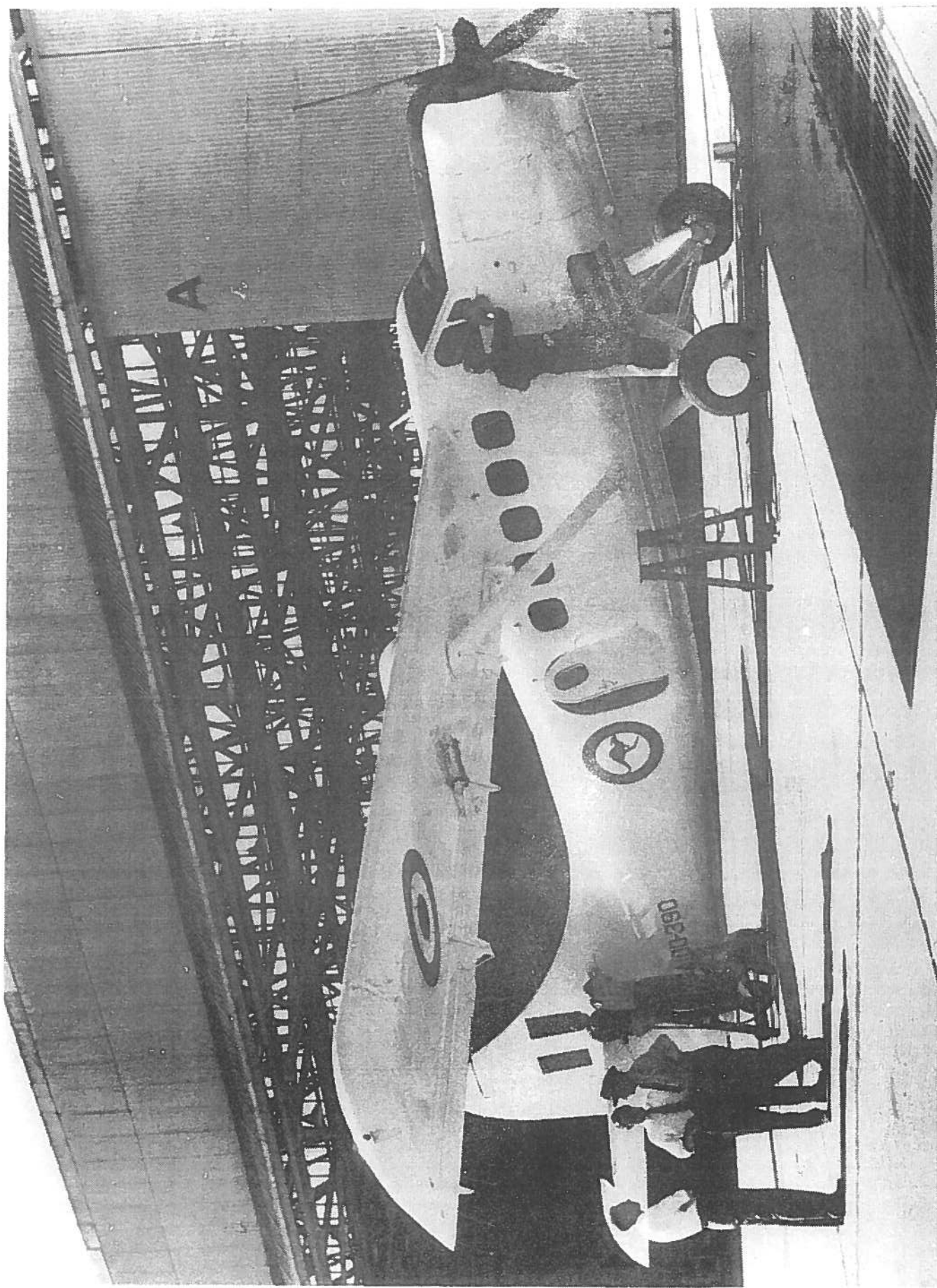
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your box of spares.

Molded in female molds, these kits contain much surface detail, but the quality of this detail varies greatly from kit to kit. The Renard, which has the poorest surface detail, is undoubtedly the earliest of these kits. However, Alpha seems to have learned the business quickly because there is a noticeable improvement in the Romeo and Lublin, and with the Fokkers and Potez an acceptable standard is achieved. The most recent kits, the Dornier, Høver, & Avro, are very good.

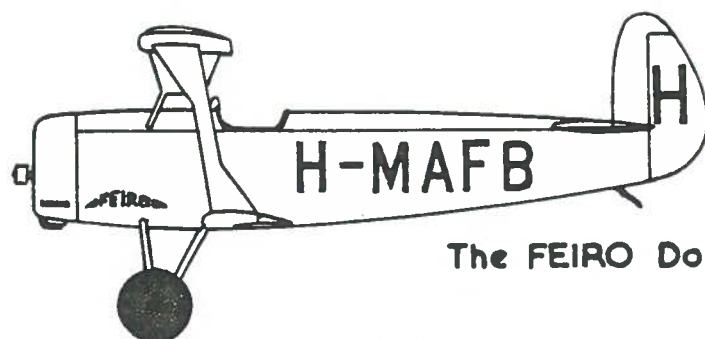
The instruction sheets include good 1/72-scale drawings from which measurements can be taken to either construct the small parts or to help locate suitable substitutes. Not all the instruction sheets include color schemes, and those that do are rather rudimentary (although the Ethiopian Potez did catch my interest). In any case, most modelers will want to do their own research.

All kits (except the Avro) cost US \$4.00 plus \$2.00 for airmail postage. The CF-100 is US \$6.00 plus \$2.00 airmail postage. They may be obtained from Alpha Productions, 14 Al. J. Chesson, 4950 Beaufays, BELGIUM.



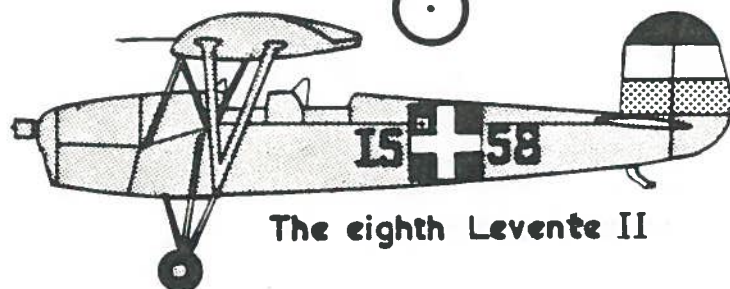
Royal Australian Otter (DeHavilland of Canada)

Hungarian trainers (2)



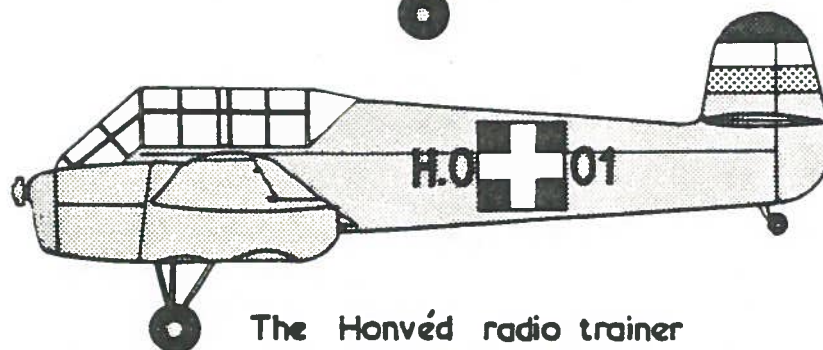
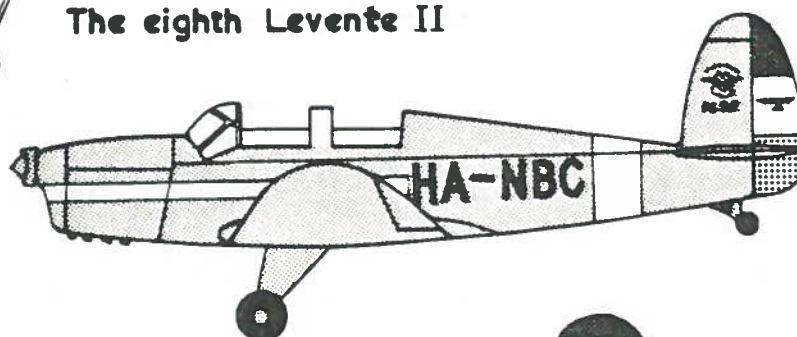
The FEIRO Dongó

A late series
Hungária



The eighth Levente II

The first MÁVAG-
built M.25 Nebuló



The Honvéd radio trainer

270